

SPEUSIPPUS OF ATHENS

PHILOSOPHIA ANTIQUA

A SERIES OF MONOGRAPHS ON ANCIENT PHILOSOPHY

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W. J. VERDENIUS AND J. C. M. VAN WINDEN

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LEONARDO TARÁN

SPEUSIPPUS OF ATHENS



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E. J. BRILL

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SPEUSIPPUS OF ATHENS

A CRITICAL STUDY WITH A COLLECTION
OF THE RELATED TEXTS AND COMMENTARY

BY

LEONARDO TARÁN



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For Sonya and Gabriel

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PREFACE

The main purpose of this book is to provide a collection and study of the extant evidence concerning the life and thought of Speusippus, Plato's nephew and his successor as head of the Academy. It must be emphasized that the collection of texts printed here is meant to be used in conjunction with the commentary. Also, those who intend to use the collection of texts even for purposes incidental to Speusippus should first read the Introduction to this work.

I should like to thank the following individuals and institutions for their help and interest in my work: Professor Harold Cherniss discussed with me many problems related to Speusippus, Aristotle, and the early Academy. Professor Eric Turner gave generously of his time to talk with me about Crönert's theory concerning the *Academicorum Philosophorum Index Herculanensis* and was kind enough to write at length on it (cf. Appendix III). Professor Albert Henrichs provided me with a new text of F 57, sent me copies of his publications on Philodemus' *De Pietate* and corresponded with me on this subject. Professors Bernard Goldstein and David Pingree helped me with Arabic texts. Fellowships from the American Council of Learned Societies in 1971-72 and from the John Simon Guggenheim Memorial Foundation in 1975, membership at the Institute for Advanced Study, Princeton, N.J., in 1978-79, and two sabbatical leaves (1971-72 and 1978-79) from Columbia University made it possible to begin and finish this work. The Guggenheim Foundation and the Stanwood Cockey Lodge Foundation at Columbia University provided generous grants to defray the cost of publication.

May, 1980

Leonardo Tarán

ABBREVIATIONS

- AGPh* = Archiv für Geschichte der Philosophie
AJP = American Journal of Philology
CAG = Commentaria in Aristotelem Graeca
CP = Classical Philology
CQ = Classical Quarterly
CR = Classical Review
FGH = F. Jacoby, *Die Fragmente der griechischen Historiker*
FHG = C. Müller, *Fragmenta Historicorum Graecorum*
FVS = H. Diels-W. Kranz, *Die Fragmente der Vorsokratiker*, 6th ed., Berlin 1951-52
GGA = Göttingische Gelehrte Anzeigen
GHA = Göteborgs Högskolas Årsskrift
GRBS = Greek, Roman, and Byzantine Studies
JfP = Jahrbücher für Philologie
JHS = Journal of Hellenic Studies
JP = Journal of Philology
LSJ = H. G. Liddell, R. Scott, and H. S. Jones, *A Greek-English Lexicon*, Oxford, 1940 (ninth ed.); *Supplement* (1968) edited by E. A. Barber and others
MH = Museum Helveticum
P.A. = J. Kirchner, *Prosopographia Attica*, 2 vols., Berlin 1901-03
PG = Patrologia Graeca
Philol. Unters. = *Philologische Untersuchungen* ed. by A. Kiessling and U. von Wilamowitz-Moellendorf
PP = La Parola del Passato
RE = Pauly-Wissowa-Kroll-etc., *Realencyclopädie der classischen Altertumswissenschaft*
REG = Revue des Études Grecques
RGVV = Religionsgeschichtliche Versuche und Vorarbeiten
Rh. Mus. = Rheinisches Museum für Philologie
Riv. Filol. = Rivista di filologia e di istruzione classica
SVF = H. von Arnim, *Stoicorum Veterum Fragmenta*, 4 vols. Leipzig 1903-1924 (vol. IV [Indices] by M. Adler)
TAPA = Transactions of the American Philological Association
WS = Wiener Studien

EDITIONS AND SIGLA*

- Academicorum Philosophorum Index Herculanensis*, ed. S. Mekler, Berlin 1902
- Aelian, *Varia Historia*, ed. M. R. Dils, Leipzig 1974
- V = Parisinus Suppl. Gr. 352, saec. XIII
- x = consensus of the following MSS
- d = Laurentianus 60.19, saec. XIV
- g = Ambrosianus C 4 sup. (gr. 164), saec. XV
- a = Parisinus Gr. 1693, saec. XV
- b = Parisinus Gr. 1694, saec. XVI
- Aetius = *Aetii Placita Philosophorum*, in H. Diels, *Doxographi Graeci*, Berlin 1879
- [Alexander], *In Aristotelis Metaphysica Commentaria* (books E-N), ed. M. Hayduck, *CAG*, I, Berlin 1891, pp. 440 ff.
- Anonymos Syrus, tr. A. Baumstark, *Aristoteles bei den Syrern vom V.-VIII. Jahrhundert.*, Leipzig 1900, pp. 116 ff.
- Anonymous, *In Analyticorum Posteriorum Librum Alterum Commentarium*, ed. M. Wallies, *CAG*, XIII. 3, Berlin 1909, pp. 547 ff.
- R = Laurentianus 85.1, saec. XIV
- U = Marcianus Gr. 225, saec. XIV
- a = Aldine ed., Venice 1534
- Anonymous, *In Ethica Nicomachea Commentaria*, ed. G. Heylbut, *CAG*, XX, Berlin 1892, pp. 407 ff.
- B = Coislinianus 161, saec. XIV
- a = Aldine ed., Venice 1536
- Anonymous, *In Aristotelis Sophisticos Elenchos Paraphrasis*, ed. M. Hayduck, *CAG*, XXIII. 4, Berlin 1884 (this work is probably by Sophonias)
- L = Laurentianus 71.32, saec. XIV
- P = Parisinus Gr. 1831, saec. XV
- N = Neapolitanus III E 12, saec. XV
- M = Monacensis 38, saec. XVI
- Anonymous, *In Platonis Parmenidem Commentarium*, ed. W. Kroll, *Rh. Mus.* 47 (1892), pp. 599-627; ed. P. Hadot, *Porphyre et Victorinus*, II (Paris 1968), pp. 61-113
- Anthologia Palatina* and *Anthologia Planudea*, ed. H. Beckby, 4 vols., first ed. Munich, 1957-58; second ed. no date, ca. 1965
- Apuleius, *De Platone*, ed. P. Thomas, Leipzig 1908; ed. J. Beaujeu, Paris 1973
- A = Parisinus 8624, saec. XIII
- B = Bruxellensis 10 054-6, saec. XI
- B³ = corrections by a later hand
- F = Florentinus, olim Marcianus 284, saec. XII
- L = Laurentianus 76.36, saec. XII vel XIII
- M = Monacensis 621, saec. XII
- N = Neerlandensis, Leidensis Vossianus 4° 10, saec. XI
- P = Parisinus 6634, saec. XII
- V = Vaticanus 3385, saec. XII
- Aristotle, *Analytica Posteriora*, ed. W. D. Ross, Oxford 1949; repr. with corr. 1957
- A = Urbinas 35, saec. IX vel X in.
- B = Marcianus 201, anni 955

* Since my information comes from the editions listed, there are in a few instances slight inconsistencies in the dating of some MSS.

- d = Laurentianus 72.5, saec. XI
 n = Ambrosianus 490 (olim L 93), saec. IX
 Selected readings
 D = Coislinianus 157, saec. XIV medii
 M = Marcianus App. IV. 51
 Commentaries
 Anonymous, Eustratius, Philoponus, Themistius
 Aristotle, *De Anima*, ed. D. Ross, *Aristotle, De Anima*, Oxford 1961
 Aristotle, *De Caelo*, ed. P. Moraux, Paris 1965
 E = Parisinus Gr. 1853, saec. X medii
 E² = corrector primus, saec. X medii
 J = Vindobonensis Phil. Gr. 100, saec. IX medii
 H = Vaticanus Gr. 1027, saec. XII
 Selected readings
 recc. = codices recentiores nonnulli, ab EJH distincti
 Commentary
 Simplicius
 Aristotle, *De Motu Animalium*, ed. M. C. Nussbaum, *Aristotle's De Motu Animalium*, Princeton 1978
 E = Parisinus Gr. 1853, saec. X
 H^a = Marcianus Gr. Z 214, saec. XIII-XIV
 L = Vaticanus Gr. 253, saec. XIV in.
 O^d = Marcianus Gr. Z 209, saec. XII-XIII
 S = Laurentianus 81.1, saec. XII-XIII
 X = Ambrosianus H 50 sup., saec. XII-XIII
 Y = Vaticanus Gr. 261, saec. XIII-XIV
 Γ = G. Moerbekensis translatio
 Λ = Nicolai Leonici translatio
 Selected readings
 N = Vaticanus Gr. 258, saec. XIV in.
 P = Vaticanus Gr. 1339, saec. XIV
 a = EY
 b = O^dSXH^aLPN
 b₁ = O^dS
 Commentary
 Michael Ephesius
 Aristotle, *De Partibus Animalium*, ed. B. Langkavel, Leipzig 1868; ed. P. Louis, Paris 1956
 E = Parisinus Gr. 1853, saec. X
 P = Vaticanus Gr. 1339, saec. XIV vel XV
 Π = Parisinus Gr. 1864, saec. XV
 U = Vaticanus Gr. 260, saec. XI
 S = Laurentianus 81.1, saec. XIII
 Σ = Parisinus Gr. 1863, saec. XIV
 Z = Oxoniensis Collegii Corporis Christi 108, saec. XII
 Δ = Parisinus Gr. 333, saec. XV ex.
 Y = Vaticanus Gr. 261, saec. XIII vel XIV
 Commentary
 Michael Ephesius
 (My critical apparatus is based on Louis' reports. It should be noted that no editor has hitherto made a complete collation of Z; therefore no readings for it should be inferred unless this MS is explicitly mentioned in the critical apparatus. Δ seems to be a descendant of Z.)

- Aristotle, *Ethica Nicomachea*, ed. I. Bywater, Oxford 1894
 K^b = Laurentianus 81.11, saec. X
 L^b = Parisinus gr. 1854, saec. XII
 M^b = Marcianus Gr. 213, saec. XV
 Γ = Antiqua translatio (ed. Paris 1497)
 Commentaries
 Aspasius, [Heliodorus], Anonymous, Michael Ephesius, Eustratius
 Aristotle, *Metaphysics*, ed. W. D. Ross, 2 vols., Oxford 1924; reprinted with
 corr. 1953; ed. W. Jaeger, *Aristotelis Metaphysica*, Oxford 1957
 E = Parisinus Gr. 1853, saec. X
 J = Vindobonensis Phil. Gr. 100, saec. X
 A^b = Laurentianus 87.12, saec. XII
 Γ = Gulielmi de Moerbeka translatio, saec. XIII
 Commentaries
 Alexander, Pseudo-Alexander, Themistius, Syrianus, Asclepius,
 [Philoponus]
 Aristotle, *Sophistici Elenchi*, ed. I. Strache and M. Wallies, Leipzig 1923;
 ed. W. D. Ross, Oxford 1958
 A = Urbinas 35, saec. IX vel X in.
 B = Marcianus 201, anni 955
 C = Coislinianus 330, saec. XI
 D = Parisinus Gr. 1843, saec. XIII
 u = Basileensis 54 (F II 21), saec. XII
 Λ = Boethii translatio
 Selected readings
 c = Vaticanus 1024, saec. X vel XI in.
 T = Laurentianus 72.12, saec. XIII
 Commentaries
 Michael Ephesius (CAG II. 3); Sophonias (CAG XXIII. 4)
 Aristotle, *Topics*, ed. J. Brunschwig, *Aristote, Topiques*, Tome I, Livres I-IV,
 Paris 1967
 A = Urbinas 35, paulo ante 901
 B = Marcianus 201, anni 954
 V = Barberinianus 87, saec. X
 P = Vaticanus 207, saec. XIII
 C = Coislinianus 330, saec. XI
 c = Vaticanus 1024, saec. X vel XI in.
 u = Basileensis 54 (F II 21), saec. XII
 D = Parisinus Gr. 1843, saec. XIII
 Λ = Boethii translatio
 Asclepius, *In Aristotelis Metaphysicorum Libros A-Z Commentaria*, ed. M.
 Hayduck, CAG, VI. 2, Berlin 1888
 A = Parisinus Gr. 1901, saec. XIII
 D = Monacensis 103, saec. XVI
 Aspasius, *In Ethica Nicomachea Quae Supersunt Commentaria*, ed. G. Heylbut,
 CAG, XIX. 1, Berlin 1889
 Z = Parisinus 1903, saec. XVI
 N = Laurentianus 85.1, saec. XIV
 Athenaeus, *Deipnosophistae*, ed. G. Kaibel, 3 vols. Leipzig 1887-1890
 A = Marcianus 447, saec. X
 C = Parisinus Suppl. Gr. 841, anni 1482
 E = Laurentianus 60.2, saec. XV-XVI
 (Only C and E preserve the *Epitome* for books I-III. For books I-II,

- I have also consulted the edition of A. M. Desrousseaux and C. Astruc, Paris 1956, who unlike Kaibel consider that also B [= Laurentianus 60.1, saec. XV-XVI] is a primary witness for the *Epitome*. Following Kaibel, I have not reported the readings of this last MS; but no important variants are involved in the passages concerning Speusippus.)
- Augustine, *De Civitate Dei*, ed. Dombart-Kalb, Leipzig 1928
- Bar Hebraeus, *Chronography* or *Chron. Syr.*, transl. by Baumstark (cf. under *Anonymos Syrus*) and by E. A. Wallies Budge, *The Chronography of Gregory Abū'l Faraj, the Son of Aaron, the Hebrew Physician Commonly Known as Bar Hebraeus, Being the First Part of his Political History of the World*. Vol. I: English Translation, London 1932.
- Boethius, *In Aristotelis De Interpretatione, editio secunda*, ed. C. Meiser, Leipzig 1880
- S = Codex (Salisb. 10) Bibl. Palat. Vindob. 80 (Endlicheri 370), saec. X
- F = Codex (Frisingensis 166) Monacensis 6366, saec. XI (for F 76)
- T = Codex (Tegerseensis 479) Monacensis 18479, saec. XI
- E = Codex (Ratisb. S. Emm. 582) Monacensis 14582, saec. XI
- [Chion], *Epistulae*, ed. I. Düring, *GHA* 57, 1951: 5
- Cicero, *Academica*, ed. O. Plasberg, Leipzig 1922
- Cicero, *De Legibus*, ed. K. Ziegler, Heidelberg 1950
- A = Vossianus 84, saec. IX ex. vel X in.
- B = Vossianus 86, saec. XII
- H = Heinsianus 118, saec. XI
- V = ABH
- Cicero, *De Natura Deorum*, ed. W. Ax, 2nd. ed. Leipzig 1933
- Cicero, *Tusculanae Disputationes*, ed. M. Pohlenz, Lipsiae 1918
- G = Gudianus 294, saec. X
- K = Cameracensis 842, saec. IX
- R = Parisinus 6332, saec. IX
- V = Vaticanus 3246, saec. IX-X
- ς = recentiores
- X = GKRv
- Clement, *Stromateis*, ed. O. Stählin; 3rd. ed. revised by L. Früchtel, Berlin 1960 (books I-VI)
- Damascius, *De Principiis*, ed. C. A. Ruelle, *Damascii Successoris Dubitationes et Solutiones De Primis Principiis, In Platonis Parmenidem*, 2 vols., Paris 1889 (cf. comm. on F 49a)
- A = Marcianus 246, ca. A.D. 900
- Damascius (olim Olympiodorus), *In Platonis Phaedonem*, ed. L. G. Westerink, *The Greek Commentaries on Plato's Phaedo. Vol. II: Damascius*, Amsterdam, Oxford, New York 1977. Verhandelingen der Koninklijke Nederlandse Akademie van Wetenschappen, Afd. Letterkunde, Nieuwe Reeks, deel 93
- Diogenes Laertius, ed. H. S. Long, 2 vols. Oxford 1964
- B = Neapolitanus Borbonicus III B 29, saec. XII
- F = Laurentianus 69.13, saec. XIII
- P = Parisinus 1759, saec. XIII in.
- a = BFP (all three before correction)
- Selected readings
- φ = Vaticanus 96, saec. XIII (contains excerpts; cf. A. Biedl, *Das grosse Exzerpt* Φ, Città del Vaticano 1955. *Studi e Testi* 184)
- n = Monacensis 159, saec. XVI in.
- fr = Editio Princeps Graeca, apud Frobenium, Basle 1533

- Elias, *In Aristotelis Categorias Commentaria*, ed. A. Busse, CAG, XVIII. 1, Berlin 1900
- [Elias], *In Porphyrii Isagogen*, ed. L. G. Westerink, *Pseudo-Elias, Lectures on Porphyry's Isagoge*, Amsterdam 1967
- Eusebius, *Praeparatio Evangelica*, ed. K. Mras, 2 vols. Berlin 1954-56
- I = Marcianus 341, saec. XV
- N = Neapolitanus II AA 16, saec. XV
- O = Bononiensis 3643, saec. XIII ex.
- (Eusebius)-Jerome, *Chronicon*, ed. R. Helm, second ed. Berlin 1956
- Eustratius, *In Analyticorum Posteriorum Librum Secundum Commentarium*, ed. M. Hayduck, CAG, XXI. 1, Berlin 1907
- Eustratius, *In Ethica Nicomachea*, ed. G. Heylbut, CAG, XX, Berlin 1892
- [Galen], *Historia Philosopha*, ed. H. Diels, *Doxographi Graeci*, Berlin 1879
- A = Laurentianus 74. 3, saec. XII
- B = Laurentianus 58. 2, saec. XV
- N = Nicolai Regini Versio Latina
- A. Gellius, *Noctes Atticae*, ed. P. K. Marshall, 2 vols. Oxford 1968
- F = Leouardiensis Prov. Bibl. van Friesland 55, saec. IX
- O = Vaticanus Reginensis Latinus 597, saec. IX
- X = Leidensis Vossianus F 112, saec. X
- II = Vaticanus Reginensis Latinus 1646, saec. XII
- N = Florentinus Bibl. Nat. J. 4. 26, saec. XV
- γ = consensus codicum OXIIIN vel quotquot supersunt
- Q = Parisinus 8664, saec. XIII
- Z = Leidensis Vossianus, saec. XII
- B = Bernensis 404, saec. XII
- [Heliodorus], *In Ethica Nicomachea Paraphrasis*, ed. G. Heylbut, CAG, XIX. 2, Berlin 1889
- Hesychius, *Lexicon*, ed. M. Schmidt, 5 vols., Jena 1858-1868
- Jerome, *Adversus Iovinianum*, Libri I, Capita XLI-IL; II, Capita V-XIV, ed. E. Bickel, *Diatribe In Senecae Philosophi Fragmenta, Vol. I: Fragmenta De Matrimonio*, Leipzig 1915, pp. 373-420
- E = Veronensis XVII 15, saec. VII
- S = Sessorianus 128 (Bibl. Naz. 2109), saec. VII-VIII
- ς = Monacensis 6313, scriptus inter annos 957 et 993
- A = Vaticanus 341, saec. X-XI
- C = Bernensis 251, saec. XII-XIII
- Jerome, cf. under Eusebius
- Iamblichus, *De Communi Mathematica Scientia Liber*, ed. N. Festa, Leipzig 1891
- Iamblichus, *De Anima*, cf. under Stobaeus
- [Iamblichus], *Theologoumena Arithmeticae*, ed. V. de Falco, Leipzig 1922
- M = Marcianus 234, saec. XV in.
- L = Laurentianus 30.71, saec. XV
- P = Parisinus 1943, saec. XVI
- N = Neapolitanus III C 7, saec. XV ex.
- B = Neapolitanus III C 8, saec. XV ex. vel XVI in.
- F = Magliabechianus 14 (XI 38), saec. XVI
- E = Mutinensis 90 (III C 11), saec. XIV in.
- A = Ambrosianus 780 (Et 157 sup.), saec. XIV ex.
- (Only M and, for part of it, A are primary witnesses for F 28; on this and on other secondary MSS cf. introductory note to F 28)
- Macrobius, *Saturnalia*, ed. J. Willis, Leipzig 1963

- Michael Ephesius, *In Ethica Nicomachea*, ed. G. Heylbut, CAG, XX, Berlin 1892
- Minucius Felix, *Octavius*, ed. J. Beaujeu, Paris 1964
- Pap. Oxyrh. I, 12, ed. by B. P. Grenfell and A. S. Hunt, *The Oxyrhynchus Papyri*, Part I, London 1898 = FGH 255
- Philodemus, *De Pietate*, ed. A. Henrichs, cf. comm. on F 57
- Philoponus, *In Aristotelis Analytica Posteriora Commentaria*, ed. M. Wallies, CAG, XIII. 3, Berlin 1909
- C = Coislinianus 167, saec. XIV
- F = Parisinus 1972, saec. XII-XIV
- E = Coislinianus 157, saec. XIV
- a = Aldine ed., Venice 1534
- [Philoponus], *In Aristotelis Metaphysica*, Latin translation by F. Patrizzi, Ferrara 1583
- Philostratus, *Vita Apollonii*, ed. C. L. Kayser, Zürich 1844; Leipzig 1871
- Photius, *Lexicon*, ed. S. A. Naber, 2 vols., Leiden 1864-65
- [Plato], *Epistulae*, ed. J. Burnet, Oxford 1907
- A = Parisinus 1807
- O = Vaticanus 1
- Plutarch, *Dion*, ed. K. Ziegler, *Plutarchi Vitae Parallelae*, II, i², Leipzig 1964
- Plutarch, *Adversus Colotem*, ed. M. Pohlenz, rev. by R. Westman, Leipzig 1959; ed. B. Einarson and P. De Lacy, Cambridge, Mass.-London 1967
- Plutarch, *De Communibus Notitiis Adversus Stoicos*, ed. H. Cherniss, Cambridge, Mass.-London 1976
- B = Parisinus 1675, saec. XV
- E = Parisinus 1672, paulo posterior A. D. 1302
- Plutarch, *De Fraterno Amore*, ed. M. Pohlenz, Leipzig 1929
- Plutarch, *De Liberis Educandis*, ed. M. Pohlenz, Leipzig 1925; repr. with corr. by H. Gärtner, Leipzig 1974
- Plutarch, *Quaestiones Convivales* I, ed. C. Hubert, Leipzig 1938; ed. P. Clement, Cambridge, Mass.-London 1969
- Plutarch, *Quaestiones Platonicæ*, ed. H. Cherniss, Cambridge, Mass.-London 1976
- X = Marcianus 250, saec. XIV
- J = Ambrosianus 881, C 195 inf., saec. XIII
- g = Vaticanus Palatinus 170, saec. XV
- α = Ambrosianus 859, C 126 inf., anni 1295
- A = Parisinus 1671, A.D. 1296
- β = Vaticanus 1013, saec. XIV
- γ = Vaticanus 139, paulo posterior A.D. 1296
- E = Parisinus 1672, paulo posterior 1302
- B = Parisinus 1675, saec. XV
- ε = Matritensis 4690, saec. XIV
- n = Vaticanus 1676, saec. XIV
- Voss. 16 = Vossianus Misc. 16 (I) = Vossianus P 223, saec. XV
- Bonon. C 3635 = Bononiensis 3635, saec. XIV
- Escor. T-11-5 = Scorialensis T.11.5, saec. XVI
- Plutarch, *Quomodo Adulator Ab Amico Intermoscatur*, ed. M. Pohlenz, Leipzig 1925; repr. with corr. by H. Gärtner, Leipzig 1974
- Porphyrus, *Vita Pythagoræ*, ed. A. Nauck, *Porphyrus Philosophi Platonici Opuscula Selecta*, Leipzig 1886
- Proclus, *In Euclidem*, ed. G. Friedlein, Leipzig 1873
- M = Monacensis 427, saec. X (Hardt), saec. XI vel XII (Friedlein)
- Grynaeus = editio prima, S. Grynaeus, 1533

- C = corrector Monacensis A. Gr. 1060; exemplar primae editionis
 B¹ = Bononiensis, Bibl. S. Salvatoris 223
 B² = Barberinus 101, saec. XV
 B³ = Barberinus 145, saec. XVI
 (according to Friedlein M is the main witness)
 Proclus, *In Parmenidem*, Latin translation presumably by William of Moerbeke, ed. R. Klibansky-C. Labowsky, London 1953 = *Plato Latinus*, vol. III
 A = Ambrosianus A 167 sup., saec. XVI
 C = Cusanus Hospit. S. Nicolai 186, saec. XV
 C¹ = manus Ioannis Andreae de Bussis in C, saec. XV
 L = Lipsiensis Bibl. Senat. Rep. I fol. 26, saec. XV
 O = Oxoniensis Bodleianus Digbeianus 236, saec. XIV
 V = Vaticanus 3074, saec. XV
 Λ = Archetypus codicum Latinorum
 Pseudo-Elias, cf. under [Elias]
 Scholion on Aristotle, *De Caelo* 279 B 32 ff., ed. C. A. Brandis, *Aristotelis Opera*, Vol. IV, Berlin 1836
 Scholion on Aristotle, *Eth. Nic.* 1153 B 1 ff., ed. J. A. Cramer, *Anecdota Graeca e Codd. Manuscriptis Bibliothecae Regiae Parisiensis*, Vol. I, Oxford 1839
 Seneca, *Ad Lucilium Epistulae Morales*, ed. L. D. Reynolds, 2 vols., Oxford 1965
 Seneca, *De Ira*, ed. L. D. Reynolds, *L. Annaei Senecae Dialogorum Libri Duodecim*, Oxford 1977
 Sextus, *Adversus Mathematicos* VII, ed. H. Mutschmann, *Sexti Empirici Opera*, Vol. II, Leipzig 1914
 N = Laurentianus 85.19, saec. XIII
 L = Laurentianus 85.11, saec. XV
 E = Parisinus 1964, saec. XV
 A = Parisinus 1963, saec. XVI
 B = Berolinensis Phillipicus 1518, saec. XVI
 V = Marcianus 262, saec. XV
 R = Regiomontanus 16^b 12
 ζ = ABVR
 Simplicius, *In Aristotelis Categorias Commentarium*, ed. C. Kalbfleisch, *CAG*, VIII, Berlin 1907
 J = Marcianus 224, saec. XI
 L = Ambrosianus E 99 sup., saec. XIII vel XIV
 L¹ = correctiones primae manus
 L⁴ = corrector recentior
 A = Parisinus 1942, saec. XIII vel XIV
 A^p = corrector recentior
 K = Marcianus 225, saec. XIV
 v = Editio prima, Venice 1499
 Simplicius, *In Aristotelis Physicorum Libros Quattuor Priores Commentaria*, ed. H. Diels, *CAG*, IX, Berlin 1882
 Sophonias, cf. under Anonymous, *In Aristotelis Soph. Elench.*
 Stobaeus, *Anthologii Libri Duo Priores*, ed. C. Wachsmuth, Vol. I, Berlin 1884
 F = Farnesianus Neapol. III D 15, saec. XIV
 P = Parisinus 2129, saec. XV
 Stobaeus, *Anthologii Libri Duo Posteriores*, ed. O. Hense, Vol. III (= Vol. V), Berlin 1912

- Suidas, *Lexicon*, ed. A. Adler, 5 vols., Leipzig 1928-1938
 (on the question of the title "*Suda*", cf. Tarán, *Academica*, pp. 124, n. 514 and 379-380)
- Syrianus, *In Aristotelis Metaphysica Commentaria*, ed. G. Kroll, *CAG*, VI. 1, Berlin 1902
- Tertullian, *Apologeticum*, ed. E. Dekkers, Turnholti 1954, *Corpus Christianorum, Series Latina*
- Themistius, *Analyticorum Posteriorum Paraphrasis*, ed. M. Wallies, *CAG*, V. 1, Berlin 1900
- Themistius, *Paraphrasis In Metaphysicorum Librum A*, Latin translation of Hebrew version by M. Finzius, ed. and revised by S. Landauer, *CAG*, V. 5, Berlin 1903
- Themistius, *Orationes*, Vol. II, ed. H. Schenkl, G. Downey, A. F. Norman, Leipzig 1971
 A = Ambrosianus J 22 sup., saec. XV
 II = Coislinianus 323, saec. XV
 (AII for *Oratio* XXXI; A for *Oratio* XXXIV; the tradition for *Oratio* XXI is different, but I have cited no variant readings in this case)
- Theodoretus, *Graecarum Affectionum Curatio*, ed. I. Raeder, Leipzig 1904
- Theophrastus, *Metaphysics*, ed. W. D. Ross and F. H. Fobes, Oxford 1929
 P = Parisinus 1853, saec. X
 J = Vindobonensis Phil. Gr. 100, saec. X in.
 C = Marcianus 211, saec. XIII
 R = Vaticanus Palatinus 162, saec. XV
 B = Bernensis 402, saec. XV
 H = Vossianus 4^o. 25, saec. XV
 D = Ambrosianus P. 80 sup., saec. XV
 Σ = RBHD
 Arabic version: cf. comm. on F 83 with note 266 there
 Selected readings
 V^a = Urbinas 108, saec. XV
 u = Reginensis 124, saec. XVI
- Valerius Maximus, ed. C. Kempf, Leipzig 1888
Vita Aristotelis Latina, ed. I. Düring, *Aristotle Biogr. Trad.*, pp. 151 ff.
Vita Aristotelis Marciana, ed. O. Gigon, Berlin 1962
Vita Aristotelis Vulgata, ed. I. Düring, *Aristotle Biogr. Trad.*, pp. 131 ff.

SYMBOLS

a) *In manuscripts* (= MSS)

[] = excision of letters or words in MSS

< > = supplement of letters or words missing in MSS

Unless otherwise specified, a number above the line designates a corrector's hand.

In the case of the Aristotelian commentators, small letters above the line designate the way a reading has been preserved, e.g. pseudo-Alexander^c, ^l, ^p = pseudo-Alexander, citation, lemma, paraphrasis, etc.

b) *In papyri*

[] = supplement of letter or letters now unreadable or not extant in papyrus

⌈ ⌋ = excision of letter or letters extant in papyrus

< > = supplement of letter or letters omitted by scribe

INTRODUCTION

A new collection of the ancient evidence about the life, works, and doctrines of the philosopher Speusippus need not be justified at length. The *testimonia* themselves have never before been collected in systematic fashion; and, though most of the relevant texts were discussed by Fischer in his *De Speusippi Atheniensis Vita* of 1845 and by Merlan in his article "Zur Biographie des Speusippos" published in 1959, neither of these works provides a critical evaluation of our sources.¹ The fragments instead have been collected twice before: First by Mullach in the third volume of his *Fragmenta Philosophorum Graecorum* (1881) and later by Lang in his doctoral dissertation *De Speusippi Academici Scriptis, Accedunt Fragmenta* (1911). The shortcomings of Mullach's collection of the fragments of the Greek philosophers are so well known that there is no need to discuss those of his edition of the Speusippean texts in particular. And Lang's collection, though far superior to Mullach's, was nevertheless incomplete even for its time. (More about it *infra*.)

No commentary on the texts related to Speusippus has hitherto been published.² Now, the nature of our evidence being what it is, it ought to be obvious that no satisfactory collection of Speusippus' fragments can ever be produced unless it is accompanied by a commentary where all the pertinent problems are discussed. For, apart from an extensive verbatim quotation (F 28) and a few short fragments which can be assigned to specific works (F 1-27), most of the evidence comes from Aristotle and from passages where usually Speusippus' doctrine is compared to and contrasted with those of other Platonists, especially Plato and Xenocrates. Unfortunately, Aristotle seldom identifies the theories against which he argues by the names of the philosophers who held them, and in his criticisms he often conflates the several Platonistic doctrines

¹ Cf. Chapter I with note 14 there.

² Professor Isnardi Parente has kindly informed me that a collection of the fragments of Speusippus with commentary which she has prepared is now (1979) in the press. Since her numerous publications on Speusippus show that our interpretations and scholarly methods are quite different, I should think that my work will not duplicate the results of hers. (Cf. also Addenda.)

in order to refute them all at once. Moreover, his reports and criticisms are not easy to understand because they are often elliptical; and, so far as those which refer to Speusippus are concerned, they have not been well discussed by the ancient and the modern commentators of his works even when they have been discussed at all. Furthermore, we are handicapped by the fact that the ancient commentaries on the relevant works of Aristotle—*Categories*, *Topics*, *Sophistici Elenchi*, *De Caelo*, *De Anima*, *De Partibus Animalium*, *De Motu Animalium*, *Metaphysics*, and *Ethica Nicomachea*—provide little or no information about Speusippus, and the late commentators such as pseudo-Alexander, Syrianus, Asclepius, and others had no first hand knowledge and no understanding, either, of Speusippus' thought. We must also regret that in his extant works even the great commentator Alexander of Aphrodisias provides no information about our philosopher. It is therefore not surprising that Lang, who was not really concerned with the reconstruction of Speusippus' thought but with making a collection of his fragments and with studying the contents of those works of his the titles of which have come down to us, was not able to produce a satisfactory and complete collection of the pertinent evidence. He had the good sense to follow Zeller's discussion and to include the texts this scholar cited; but he neglected Robin's fundamental work *La Théorie Platonicienne des Idées et des Nombres d'après Aristote* (1908) and, not being a student of Academic thought, he failed to include passages in Aristotle that almost certainly refer to Speusippus. Finally, after the publication of Lang's dissertation, important work on Speusippus and on the Academy has been done by Ross, Stenzel, Cherniss, and others; and this alone would justify a new collection of the evidence and a systematic discussion of it.

A few words must now be said concerning the criteria that have guided me in this book. Though very little reliable information about Speusippus' life can be obtained from the extant ancient texts, I have decided to provide a collection of the evidence with commentary for two reasons. First, because I believe it important to know what the ancients themselves thought about Speusippus and to assess the reliability of their statements. Second, because many modern scholars have been influenced in their interpretations of Speusippus' thought by what some ancient sources tell us about his life. A collection of letters has come down to us, some of them

allegedly by Speusippus, others written to him or about him. I believe that none of these letters is genuine; but whether genuine or not they belong to the ancient biographical tradition. If I have decided not to include them in this book, it is only because they present special problems and because including them here would have meant adding bulk to an already lengthy book. In addition, the letters are likely to be of interest to historians rather than to students of ancient philosophy. The reader of this work who is interested in them is hereby referred to my monograph *The Pseudo-Speusippean Letters* where he will find a critical edition of the letters in question together with an introduction and commentary. A few fragments of letters, allegedly to and by Speusippus, which are quoted by ancient authors (cf. T 1, lines 13-16; T 32; T 39a-b; T 48), have been included also in the present study because they belong to the biographical tradition with which we are here concerned. (Except for T 1-3, the *Testimonia* are printed roughly in the order of topics in Diogenes' life of Speusippus [= T 1].)

As to the fragments themselves, I have printed first those that our sources ascribe or seem to ascribe to individual works (cf. F 1a-28). Thereafter I have printed the texts which refer to Speusippus' doctrine roughly in the following order: fragments which preserve his metaphysical views (F 29a-62), his epistemology (F 63a-76), his ethics (F 77-84), a text which preserves an etymology (F 85), and two epigrams (F 86-87a-b), the first of which is probably genuine, while the second in its two versions is almost certainly spurious. It should be emphasized that though I speak of "fragments" we are dealing for the most part with reports about Speusippus' doctrines, and that in some cases they really do not contain reliable information about his thought. But to distinguish between genuine, doubtful, and spurious fragments in the case of Speusippus would have resulted in unnecessary complication. For the main task of the interpreter of Speusippus must be to study every piece of possible evidence about his thought and to distinguish between what can and what cannot be ascribed to him with reasonable probability. Since even within a given text we have often to make such a distinction, it has seemed best to arrange the texts according to their main contents and to discuss in the commentary the question of their authenticity and reliability. An exception has been made with three texts where Speusippus is not named and which almost certainly do not refer to him at all. Even in these

cases the relevant passages have been printed and discussed in other parts of this work (cf. Chapter V and Appendix II).

The Aristotelian evidence about Speusippus has been adduced in support of many different interpretations, more often than not without any indication of the criteria scholars have used in evaluating the reliability, consistency or inconsistency, of that testimony and in deciding which parts of it are to be trusted and which are to be rejected. On the other hand, in some quarters it has now become fashionable to brush aside parts of the Aristotelian evidence either for no reason at all or simply because Aristotle does not mention Speusippus' name, so that we cannot know to whom he is referring. It is therefore appropriate to state briefly the method which I have followed in handling Aristotle's testimony.

In his extant works Aristotle mentions Speusippus by name four times, twice in the *Metaphysics* (F 29a and F 42a) and twice in the *Nicomachean Ethics* (F 47a and F 80a); and we know on the authority of Eudemus (F 63b) that the doctrine Aristotle attacks in F 63a is that of Speusippus. In all these passages Aristotle refers to doctrines which are typically Speusippean (in some instances this can be corroborated by evidence independent of him) and in F 29a, F 42a, and F 47a he contrasts Speusippus' doctrine with that of other Platonists, especially Plato and Xenocrates. These passages, then, enable us to identify other references to our philosopher in the Aristotelian corpus in places where he is not mentioned; for Aristotle never confuses the doctrine of Speusippus as he describes it in the five texts mentioned above with that of Plato, Xenocrates, or any other Platonist. And there are certain tenets which he considers to be typical of Speusippus' theory and not of those of Plato and of Xenocrates. Take for example the belief in the substantiality of the non-material point. This conception Aristotle clearly ascribes to Speusippus (cf. F 51) and to him only. Moreover, Speusippus' own words show that he held this doctrine (cf. F 28, lines 33-36, 38-40, 61-62). Furthermore, it is Aristotle's consistent testimony that the Platonists conceive numbers to be congeries of abstract monads whereas the Pythagoreans, who did not "separate" numbers and magnitudes, believe in numbers which have magnitude because the component units are sensible monads (cf. F 29a with note 82 there; F 33 with comm. *ad loc.*; and on F 38, line 1). Finally, Aristotle explicitly tells us that Plato denied the substantiality of the point; and the fact that Xenocrates held the doctrine of

indivisible lines, that he derived the line from matter and the number two, and that after the idea-numbers he posited the separate existence of lines and planes, is evidence that he did not believe in the substantiality of the non-material point either (cf. on F 38, line 1 with note 133 there). It stands to reason, then, that all the Aristotelian passages which mention the theory of the substantiality of the non-material point must be taken to be references to Speusippus' doctrine unless strong and unimpeachable evidence to the contrary can be adduced. Yet we often find that some scholars ascribe this doctrine also to Plato and/or Xenocrates, others to the Pythagoreans, and still others say either that the doctrine is "Academic" or that we cannot know to whom Aristotle is referring (cf. e.g. on F 38, line 1 with note 133 there and on F 62 with note 202 there).

When one accepts parts of Aristotle's testimony and doubts or rejects other parts of it, it is necessary to explain why one does so. Simply to dismiss part of the Aristotelian evidence with the vague assertion that Aristotle often distorts the doctrines of his predecessors, without explaining why and in what way he does so, is to open the way to arbitrary interpretations and to prevent the establishment of scholarly consensus in those cases in which it is possible to reach it. In the case of the Aristotelian evidence it is necessary to take into account, among other things, Aristotle's own doctrine, the fact that more often than not he reports the theories of his predecessors in his own terminology and categories of thought, and that these "reports" are then taken as the butt of his criticisms. For these and other related reasons, in the commentary on the Aristotelian texts I have always given a paraphrase of the context where a given fragment occurs and have then discussed the grounds for ascribing the doctrine in question to Speusippus. This is usually followed by a discussion of the contents of the text of the fragment itself and of the inferences than can be drawn from it. In the final part I try to clarify the meaning of Aristotle's arguments against Speusippus. The validity of these arguments has usually been discussed in chapters II-IV in connection with the general outline of Speusippus' philosophy. The main purpose of this discussion is not in each case to decide whether Aristotle's criticism is cogent or not (this is often impossible in view of the scarcity of our evidence) but to try to determine from his arguments in refutation what additional information we can gather

about Speusippus' doctrine; also, to show that after assimilating the meaning of the Aristotelian testimony one must try to free oneself from the all too common tendency to understand Speusippus' thought in the light of Aristotle's terminology and doctrines.

In the case of Aristotle and of almost all the other authors who mention Speusippus' doctrines it has been necessary to print more than the lines which specifically refer to him. And so I must emphasize that the collection of the Speusippean fragments printed here should not be consulted as an autonomous source but should always be used in connection with the commentary.

For a complete list of the editions of ancient authors used in the *Testimonia et Fragmenta* and for the *sigla* used in the critical apparatus cf. pp. XII-XIX *supra*. In the question of variant readings I have reported more fully those concerning the *Fragmenta*; but in each case I trust that I have given all the information available when a variant reading or an emendation affects our understanding of the text. (Emendations which I do not accept have often been reported—and discussed—in the commentary only.) In order to facilitate reference the notes of each main section of the book (Chs. I-VI; comm. to *Testimonia*; and comm. to *Fragmenta*) have been numbered continuously; and so mere reference to a note indicates a note in the same main section. Finally, when in the first part of this work I assume that a text refers to Speusippus, it is to be understood that this ascription is based on the discussion of the text in question in the commentary.³ (I have taken into consideration all the bibliography that reached me up to December, 1979.)

³ It was only in December of 1979 (after this book was finished), thanks to the courtesy of Dr. Júlíus Špaňár who had F. Čáda's article on Speusippus (see bibliography) translated for me into German, that I was able to read this work. It consists of four parts: the first is devoted to Speusippus' biography; the second to the attestation of his works; the third to his doctrines; and the fourth to his relation to his predecessors and immediate successors. I list some of Čáda's opinions: Diogenes Laertius' main source for Speusippus' life (T 1) was Timotheus. He identifies Speusippus' father with the land-owner in Eiresidai and with the Eurymedon named in Plato's will (cf. *contra* on T 1, 3). This identification is mainly responsible for his untenable notion that Speusippus was born in 393 and that he died in 335/4 B.C. (cf. *contra* p. 7 and on T 1, lines 4-5, T 7, and T 8). On the basis of a faulty knowledge of the MSS of Diogenes Laertius Čáda tries to explain the defects in the list of Speusippus' works as due to an interpolator. He believes that Epicrates' parody contains reliable information about the early Academy (cf. *contra* on T 33). He thinks that Plato identified the One

with the good and with the divine mind (cf. *contra* on F 54a-b and on F 58) and talks of the One, the good, and *nous* in Speusippus as the "fundamental elements of being." Čáda interprets F 83 in a cosmological sense and from this text and from F 56a-b infers that Speusippus' conception of the divine was pantheistic. Without good reasons he ascribes to Speusippus a text contained in a Syriac translation from the Greek, which the source gives as coming from "Isponis" (cf. V. Ryssel, *Rh. Mus.* N.F. 51 [1896], pp. 531-532 and 535). Finally, according to Čáda Speusippus' philosophy was a synthesis of Plato's alleged later doctrine and of Pythagoreanism.

PART ONE

CHAPTER ONE

LIFE

The extant evidence about Speusippus' life is scanty, and little of it is reliable. The reasons are not difficult to discover: the greater part of ancient literature has perished; Speusippus was not a popular philosopher; and most of our information about his life does not go back to good sources. For in the fourth century B.C. and even more so in Hellenistic and later times, there arose a whole body of alleged biographies of, and anecdotes about, famous men, the purposes of which had little to do with the preservation of the historical record. Rather, this literature found its inspiration in legend, in the desire to amuse and entertain, and not least in the all too common tendency of men to rejoice in the peculiarities and shortcomings of their fellow creatures, which easily becomes sheer malicious gossip or worse. Philosophers as well as poets, statesmen, generals, and others were often made the butt of ridicule and scandal. The men who came under attack had frequently also their apologists; but they were often no more reliable than those who were hostile.¹ In this contest of wits it was not unusual for the two camps to tell the same anecdote or saying with exactly opposite intentions² and to use or misuse for their own purposes a man's name,³ ancestry,⁴ family life,⁵ illness,⁶ manner of death,⁷ and writings.⁸ It is impossible here to offer an exhaustive list of the ultimate motivations of anecdotes. However, it is noteworthy that in the case of a philosopher there was readily available an

¹ Some examples of these tendencies of the ancient biographical tradition are attested for Speusippus (cf. *infra* notes 2-11 and the comm. to the *Testimonia passim*). The much richer traditions about Plato and Aristotle will provide additional evidence. For a collection and discussion of the Platonic anecdotes cf. Riginos, *Platonica*; for those concerning Aristotle, Düring, *Aristotle Biogr. Trad.* Cf. further J. Fairweather, "Fiction in the Biographies of Ancient Writers," *Ancient Society* 5 (1974), pp. 231-275.

² Cf. on T 1, lines 22-25.

³ Cf. on T 1, lines 2-3 and 8-9.

⁴ Cf. T 1, lines 7-8 and 25-30 with the respective comm.

⁵ Cf. T 24a-b, T 25a-d, T 27, T 28.

⁶ Cf. T 1, lines 21 and 31-32; T 12.

⁷ Cf. T 1, lines 21-32 and T 41 with comm. on T 1, lines 21-25, 21 and 31-32.

⁸ Cf., with the respective comments, T 49 and F 28, lines 2-4.

additional important source of either ridicule or praise: his doctrines. Thus we often find a philosopher attacked or praised in anecdotes or sayings the ultimate origin of which is probably his own peculiar beliefs and ideas. For example, a man who like Speusippus thought that pleasure is to be avoided as an evil may easily become the butt of derision if he is ever seen to be pursuing the satisfaction of a harmless need.⁹ And even when this is not the case, his philosophic adversaries may choose to ridicule his doctrine by means of an alleged episode of his life,¹⁰ especially when their own doctrines or arguments are weak. One additional source of confusion is the existence of biographical *topoi*. These were so easily transferred from one man to another that it is often impossible to determine whether or not there may be some truth behind them.¹¹

As is also the case with most ancient philosophers, our sources about Speusippus' life reflect both the favorable and the unfavorable tendencies typical of ancient biographers.¹² Good lives, if they ever existed, have disappeared and left few traces of their influence upon the extant authors who have preserved notices about our philosopher. It appears that both the tradition favorable to Speusippus and that hostile to him started early.¹³ Consequently, in order to distinguish what is and what is not likely to be reliable evidence, it is necessary to assess the intention and the tendency of each source. What must be avoided is the reconstructions based on possible combinations of different pieces of information one,

⁹ Cf. T 1, 8 with comm. *ad loc.*

¹⁰ Cf. comm. on T 1, lines 9-10, 11-16 and 11-12.

¹¹ Cf. on T 1, lines 11-16, 22-25, and 33-34; T 25a-d with comm. *ad loc.* In this connection it is interesting to see how Plato's argument that Homer was not truly an educator, nor a general, etc., since no city claims him to have been such (cf. *Republic* 599 C ff.; see also *Ion*, esp. 540 D ff.), becomes a *topos*, and is later used by Aristides (II, p. 109 [Dindorf]) to attack Plato himself and also Socrates, Chaerophon, and Speusippus.

¹² Unfavorable to Speusippus are all the anecdotes in T 1 (Diogenes Laertius), T 16a-T 19, T 20, T 28, the saying of Timon quoted by Plutarch in T 29 (cf. *ad loc.*), T 33, T 38, T 39a-b, T 41, T 49. Favorable to him are T 11, T 22, T 24a-b, T 29, T 30, T 32, T 34, T 35, T 40, T 48. In T 3 we find favorable and unfavorable notices. In other cases it is impossible to decide whether the statements in question were meant to be favorable or unfavorable to our philosopher.

¹³ Cf. T 33 (Epicrates) and the saying of Timon in T 29, which are hostile to Speusippus, and T 35 (from Antigonus of Carystus) for a favorable story. As early sources of hostility one may identify comedy (T 33), the Isocrateans (T 1, 18-19), the *syllōi* of Timon (cf. on T 29), and probably the Peripatetics.

several, or even all of which may be suspect. In fact, however, only too frequently one finds that modern biographies have been based on the arbitrary acceptance or rejection of what our sources tell us; and so these lives do nothing but reproduce the faults of the ancient authors themselves.¹⁴ To the student of ancient biography and ancient philosophy the study and the evaluation of our sources have their own intrinsic interest. In this book that part of the work will be found in the commentary to the *Testimonia*; for, when all this task of assessing the reliability of our sources has been done, we are left with insufficient evidence to reconstruct more than the bare outline of Speusippus' life. Very little or nothing can be added to the following facts: he was the son of Plato's sister Potone and of Eurymedon of Myrrhinous; he was a member of the Academy and, at Plato's death, became its head; he was head of the school for eight years beginning in 348/7 B.C.; he dedicated statues of the *Charites* in the *temenos* of the Muses which Plato had set up in the Academy. The rest of our information about his life is at the very least suspect and not infrequently highly improbable or obviously impossible. Hence, in addition to a brief statement about the nature of the sources, the discussion here will be confined to two points that need further elucidation: the approximate dates of Speusippus' birth and death, and the probable reason or reasons for his choice to succeed Plato as head of the Academy.

Apart from a few notices and several anecdotes in sundry authors, three ancient lives of Speusippus are extant: that included in the fourth book of Diogenes Laertius (T 1), an imperfectly preserved passage in the *Academicorum Philosophorum Index Herculanensis* (T 2), and a short notice in Suidas (T 3). The life mentioned last reproduces in summary form notices included in Diogenes Laertius; but it also contains one favorable statement about Speusippus' character which is not found in Diogenes, and which may come from a different source.¹⁵ The biography in the *Acad. Index Hercul.* is particularly important because it has information not attested

¹⁴ This is a fair description of the methods used in the two monographs on Speusippus' life, Fischer's *De Speusippi Atheniensis Vita* and Merlan's *Biographie*. The latter is even more speculative than the former. My disagreements with these and other scholars will be found in the commentary on the *Testimonia*. Cf. also notes 32, 34, 35, and 37 *infra*.

¹⁵ Cf. comm. on T 3.

elsewhere: Speusippus' epigram in dedication of the *Charites*, and the circumstances and details about the election of Xenocrates. These two notices probably come from Philochorus.¹⁶ The final lines of T 2 seem to contain an unfavorable evaluation of Speusippus' character. But the restoration of the readings in the papyrus is uncertain and is based on the assumption that this passage is parallel to a statement in Diogenes Laertius, the contents of which are in any case suspect. Nor is it clear whether the author of the statement in T 2 is the members of the early Academy or Philodemus himself or his source.¹⁷

Diogenes Laertius' biography of Speusippus is the longest of the three, and it is from it that the modern reader gets a most unfavorable impression of Speusippus' character and behavior. For all the anecdotes there are hostile to the philosopher. Not that Diogenes has failed to include important information: He tells us about Speusippus' ancestry and his relation to Plato; he gives the duration of his headship of the Academy and states that it began in Olymp. 108 (348/4 B.C.); he mentions the dedication of the statues of the *Charites*; he includes a catalogue of the philosopher's writings and also a list of his "discoveries." In this last case his hostility towards Speusippus is ostensible, since the second discovery is really an accusation of having divulged the alleged secret doctrines of Isocrates.¹⁸ The anecdotes preserved by Diogenes, however, are all suspect, and those which refer to Speusippus' death are not consistent with one another.¹⁹ Diogenes, and Athenaeus, too, has not even refrained from citing and using as a reliable source the obviously spurious letters ascribed to Dionysius II.²⁰ It is quite likely that for his account about Speusippus' recalling Xenocrates and urging him to take charge of the school he is indebted to the pseudo-Speusippean letters.²¹ However that may be, the anecdotes in Diogenes hostile to Speusippus are more than counterbalanced by stories and statements favorable to him in Plutarch and others. Unfortunately, also these notices are not

¹⁶ Cf. T 2, lines 3-11 and 14-27 with comm. on T 2, lines 3-13, 3-6, and 14-27.

¹⁷ Cf. T 2, lines 27-34 with comm. *ad loc.*

¹⁸ Cf. T 1, lines 18-19 with comm. *ad loc.*

¹⁹ Cf. on T 1, lines 21-25, 21, and 31-32.

²⁰ Cf. T 1, lines 11-16 with comm. on T 1, lines 11-16 and 11-12; T 39a-b with note *ad loc.*

²¹ Cf. T 1, lines 21-22 with comm. *ad loc.*

beyond suspicion or cannot at any rate be traced back to early reliable sources.²²

Our discussion of the chronology of Speusippus' life must begin with the information that he succeeded Plato as head of the Academy in the year 348/7 B.C., during the archonship of Theophilus, and that his headship lasted eight years.²³ Therefore, the latest possible year for the end of his headship is 340/39 B.C. We also know that Xenocrates succeeded him in 339/8 B.C. when Lysimachides was archon,²⁴ and there is good reason to accept the reliability of the account given in the *Acad. Index Hercul.* that Xenocrates was elected by a simple majority of the votes cast by the members of the Academy.²⁵ The implication of this passage is that Speusippus was dead when the election of Xenocrates took place; and this fits in with the fact that between the end of Speusippus' headship and the beginning of Xenocrates' there was an unspecified time during which the Academy had no head.²⁶ From all this we may infer that Speusippus' death occurred at the very latest in the spring or early summer of 339 B.C. Therefore, we may accept the information given in T 8c, a passage which ultimately comes from Eusebius' *Chronicle*, that Speusippus died and Xenocrates succeeded him in the second year of the 110th Olymp., i.e. in 339 B.C.²⁷ Now to all appearances Speusippus was an older contemporary of Xenocrates, who was born ca. 396 B.C.;²⁸ and he is said to have been an old man when he died (T 1, 25-26), which implies that he must have been at least sixty-eight to seventy years old in 339 B.C. The probability, then, is that he was born ca. 410-408 B.C.²⁹

²² Cf. note 12 *supra* and also on T 24a-b and T 29-31.

²³ Cf. on T 1, lines 4-5 with references.

²⁴ Cf. T 7 with comm. *ad loc.*

²⁵ Cf. T 2, lines 14-27 with comm. *ad loc.* and also the notes on T 1, lines 4-5 and on T 8a-d.

²⁶ Cf. T 1, lines 4-5; T 2, lines 11-13; T 7.

²⁷ Cf. on T 7 and on T 8a-d.

²⁸ Cf. Diog. Laert. IV, 14.

²⁹ Unfortunately, we cannot be sure that Plutarch's account (cf. T 29) of Speusippus' friendship with Dion goes back to a reliable source. If indeed they were friends and roughly of the same age, then Dion's birth in approximately 409 B.C. (cf. Cornelius Nepos, *Life of Dion* ch. 10 with R. Flacelière, *Plutarque, Vies*, Tome XIV [Paris, 1978], pp. 2 with n. 2 and 74, n. 3) would provide further confirmation that the approximate date of Speusippus' birth is ca. 410-408 B.C. But this date is well established independently of the question of his friendship with Dion.

Ancient authors and modern scholars alike have been puzzled by the choice of Speusippus—rather than Aristotle—as head of the Academy; and it is this in part that has led to several different hypotheses as to the nature of the early Academy or its legal status or both.³⁰ Speusippus, however, despite the scanty information we have about his thought, seems to have been a highly original philosopher,³¹ and need not have been inferior even to Aristotle himself, at any rate not to the Aristotle of 348/7 B.C. His works are lost to us and most of what we know about his thought comes from Aristotle, whose remarks about *all* his predecessors, not merely about Speusippus, contain a mixture of praise and criticism, the latter conspicuously predominating over the former. These facts, however, are not reasons to question Speusippus' accomplishments as a philosopher.³² And the evidence we have that he was, after Plato, one of the main influences upon Aristotle himself³³ suggests that his importance as a philosopher must have been considerable already in 348/7 B.C., when he was sixty or more years old, whereas Aristotle was only thirty-seven. Nor is there any reason to think that Xenocrates' and Aristotle's departure

³⁰ For bibliography on the early Academy cf. Isnardi Parente, pp. 861-877. Her own discussion, however, is uncritical and sometimes confused, cf. e.g. her statement on p. 861 about the legal status of the Academy ("la questione non appare controversa"), p. 869 on the tendency of Speusippus' work on Plato (cf. *contra* on F 1a-b), and her acceptance of the Speusippean authorship of *Socr. Epist. XXX* (cf. *contra* my *Pseudo-Speusippean Letters*).

³¹ Cf. especially chs. II, III, IV, and VI *infra*.

³² This must be emphasized because some scholars, e.g. Chroust, *REG* 84 (1971), pp. 339 and 341 with n. 12, have cited Aristotle's criticisms of Speusippus in support of their notion that the latter was a poor philosopher. (Chroust's emphasis on the unfavorable view of Speusippus' personality need not concern us any longer.) It is easily forgotten, however, that Aristotle also praises Speusippus (cf. e.g. F 34-35, F 44, F 45a, F 47), that he is hostile to all philosophers, including Plato, and that both praise and criticism have to do with his use of his predecessors in establishing his own doctrines. Moreover, if all that had been preserved of Aristotle's works were the few extant quotations from his lost works and the doxographical statements about his doctrines, we could certainly have no idea of his importance and significance as a philosopher. As it is, however, even the bare outline we can still reconstruct of Speusippus' system shows him to have been a highly original thinker (cf. note 31); in addition, there is evidence that he made several important contributions (cf. e.g. F 28, lines 18-22 with comm. *ad loc.*; F 6-27; F 68a-c and F 69a-b; F 72-74, etc.). Finally, *pace* Chroust and others, there is evidence that he influenced Aristotle (cf. note 33) and Xenocrates (cf. pp. 18-19 *infra*).

³³ Cf. esp. pp. 64-77 and 109-111 *infra*.

from Athens after Plato's death was prompted by the appointment of Speusippus as his successor.

It is unfruitful to relate Speusippus' choice as head of the Academy to the legal problem of the transmission of the property of the land where the Academy was located. Scholars have argued that it was possible for Speusippus as an Athenian citizen to own the land, whereas it was impossible for Xenocrates or Aristotle to do so since they were foreigners.³⁴ Xenocrates, however, became head of the Academy in 339/8 B.C. when so far as our information goes ("lack of information" would perhaps be more appropriate) the legal question of owning the land was the same as in 348/7 B.C. Nor is the widely accepted notion that the Academy was organized as a *thiasos* of the Muses³⁵ a likely hypothesis. For the fact that Plato set up an altar (*temenos*) of the Muses³⁶ is *not* evidence that the Academy was legally a religious corporation. Moreover, it ought to be obvious that the early Academy was a private institution, and so its legal status, even if it had been an essentially religious body, would have had no effect upon the question of the ownership of the land and its transmission.

We have no evidence about the internal organization of the early Academy. But even the choice of Speusippus as Plato's successor shows that adherence to Plato's doctrines was not a condition

³⁴ Cf. e.g. Jaeger, *Aristoteles*², p. 111 = *Aristotle*, pp. 110-111; Chroust, *REG* 84 (1971), pp. 338-341. Against Chroust and others it is necessary to emphasize that Plato's nearest male agnate relative was in all probability the boy Adeimantus (cf. p. 11 *infra*), not Speusippus. Cf. J. Glucker, *op. cit.* in note 35 *infra*, p. 231 and n. 17 with references.

³⁵ This has been strongly emphasized by Wilamowitz, *Antigonos*, pp. 263-291 (cf. also Boyancé's *Le culte des Muses*², Lagrange, *Revue Thomiste* 34 [1929], pp. 320-322), whose discussion includes also the Peripatos and the other schools. For our purpose here it suffices to say that, no matter what the legal status and the internal organization of the Academy after Speusippus' death and of the other schools may have been (and Wilamowitz's interpretation of the evidence is questionable even in these cases), we should not make anachronistic inferences about Plato's and Speusippus' Academy on the basis of the legal status of the schools several years after Speusippus' death. Cf. also J. P. Lynch, *Aristotle's School* (Berkeley, Los Angeles, London, 1972), pp. 106-134 and J. Glucker, *Antiochus and the Late Academy* (Göttingen, 1978), pp. 229-233; Glucker, however, is still too ready to speculate on the basis of Plato's alleged testament.

³⁶ Cf. Diog. Laert. IV, 1 (= T 1, 5-6), [Olympiodorus], *Anonymous Proleg. to Platonic Philosophy*, 4, 24 (Westerink); Olympiodorus, *In Alcib.* 2, 146.

either for belonging to the school or being its head.³⁷ It is noteworthy that on the occasion of the election of Xenocrates in 339/8 B.C. Aristotle was apparently still considered a member of the school and a possible candidate to the headship, since his absence from Athens at that time seems to be given as the reason why he was not himself a candidate to succeed Speusippus.³⁸ It is unlikely that Plato offered regular courses of instruction in his own philosophy; for it is a fact that his immediate disciples or associates disagreed not only about his doctrines but even about the interpretation of some of his dialogues.³⁹ Moreover, on the single occasion of a public lecture given by Plato, which Speusippus, Xenocrates, Aristotle, and others attended, they all found the master's remarks enigmatic, though they wrote down and published them.⁴⁰ The likelihood, then, is that in its early days the Academy was a place where philosophers and mathematicians met to pursue subjects of common interest. We have no reliable evidence as to whether or not there were regular courses of instruction; but, if there were, they were probably devoted to mathematical and astronomical subjects. Philosophical lectures, if they were given, can hardly have been only on Plato's thought; nor can they have been official pronouncements about Plato's doctrines.⁴¹ Speusippus' age, then, his accomplishments as a philosopher, and his related interest in mathematics⁴² make intelligible his choice to be Plato's successor as head of the school. The probability is that Plato himself appointed him, for there is no evidence and no reason to suppose that he was chosen by the members of the Academy, as was the case with Xenocrates. Our best source for the external history of the Academy, the *Acad. Index Hercul.*, states that Speusippus "received the school

³⁷ There is no evidence for Merlan's view (*From Platonism*², p. 41 and note; *Biographie*, pp. 200-201 = *Kl. Schr.*, pp. 129-130) that Speusippus' philosophy must have seen some development, and so that he at first accepted the theory of ideas. The ultimate origin of such a hypothesis is the assumption that Plato's Academy had an official philosophic doctrine.

³⁸ Cf. T 2, lines 14-27 with comm. *ad loc.*

³⁹ Cf. on F 54a-b, F 61a-b, and Cherniss, *Riddle*, pp. 31-85.

⁴⁰ Cf. T 45a-c with comm. *ad loc.*

⁴¹ For the evidence about Plato's Academy and especially for the importance of mathematics cf. Cherniss, *Riddle*, pp. 60-85, CP 43 (1948), pp. 130-132 = *Selected Papers*, pp. 217-221, and *Review of Metaphysics* 4 (1951), pp. 395-425 = *Selected Papers*, pp. 222-252. Cherniss' critics have been unable to find reliable evidence in support of other views about the nature of the early Academy.

⁴² Cf. esp. chs. II-III, F 28, F 72-74.

from Plato.”⁴³ This might be taken to mean simply that Speusippus succeeded Plato. But the usual expression in such cases is “Speusippus succeeded Plato,”⁴⁴ or “Speusippus became head of the Academy,”⁴⁵ or “Speusippus received the school.”⁴⁶ The sentence in question, then, probably means that Speusippus was appointed head of the school by Plato himself; and, even if this is only a guess, we have every reason to suppose that before he died Plato had indicated that he wished Speusippus to be his successor. We do not know what legal or other means he used for this purpose. If the will quoted by Diogenes Laertius⁴⁷ is authentic and complete, two things which are far from certain, it tells us that Speusippus was one of Plato’s executors and that the boy Adeimantus, probably a grand-nephew of the philosopher, was to be his only heir. The Academy itself is not mentioned there, nor the land where it was situated, unless it be the estate in Eiresidai, as some scholars have suggested.⁴⁸ If this is so, the mystery about the Academy becomes even deeper, for Plato’s grand-nephew would have been the legal owner of the land at the time of Speusippus’ accession to the headship of the school.

⁴³ Cf. T 2, 1-3, Σπεύσιππος μὲν οὖν παρ’ αὐτοῦ διεδέξατο τὴν διατριβήν, with comm. *ad loc.*

⁴⁴ Cf. T 1, 2-3 διεδέξατο δ’ αὐτὸν Σπεύσιππος.

⁴⁵ Cf. T 3 Σπεύσιππος . . . διάδοχος γενόμενος τῆς Ἀκαδημίας.

⁴⁶ Cf. T 6 Σπεύσιππος τὴν σχολὴν διεδέξατο.

⁴⁷ Cf. Diog. Laert. III, 41-43.

⁴⁸ This is possible, since the estate is said to be bounded on the west by the river Cephissus. On the location of the Academy cf. J. Travlos, *Pictorial Dictionary of Ancient Athens* (London, 1971), pp. 42-43, 45 fig. 53, and 318, fig. 417.

CHAPTER TWO

SUBSTANCES AND PRINCIPLES

In *Metaphysics* 1028 B 21-24 (= F 29a) Aristotle says that, beginning with the One, Speusippus posited more substances than Plato's three (the ideas, the mathematical, and the sensibles) and different principles for each kind of substance, one for numbers, another for magnitudes, and then for the soul. The context indicates that Speusippus also admitted the substantiality of the sensibles.⁴⁹ This inference is corroborated by another passage of the *Metaphysics* (1090 B 13-19 = F 37) where, in criticizing the Speusippean universe of several kinds of substances, Aristotle mentions numbers, magnitudes, the soul, and the sensibles. We do not know whether Speusippus posited one or more kinds of substances between the soul and the sensibles,⁵⁰ nor whether he divided sensible substance itself into two kinds, as Xenocrates and Aristotle did.⁵¹ Aristotle himself indicates that the order in which he mentions the substances is Speusippean, and we have additional evidence for the priority of numbers to magnitudes and of both to the soul and the sensibles.⁵² In the discussion that follows I shall deal first with the substances and the principles in their ontological order and then with the Speusippean universe as a whole.

It is appropriate, however, to state first a few notions common to numbers and magnitudes. Speusippus rejected the Platonic ideas and, hence, did not believe either in ideal numbers or in ideal magnitudes.⁵³ Aristotle says that Speusippus' numbers and magnitudes are "mathematical" and that they are separately existing, unchangeable, and eternal entities.⁵⁴

⁴⁹ Cf. comm. on F 29a.

⁵⁰ Cf. comm. on F 37.

⁵¹ Cf. e.g. Aristotle, *Metaphysics* 1069 A 30-31 (= F 31) and Xenocrates, frag. 5 (Heinze).

⁵² Cf. pp. 20-23 and 53-62 *infra*.

⁵³ Besides being the implication of *Metaphysics* 1028 B 21-24 (= F 29a) and of several other passages (cf. e.g. F 30-32, and Speusippus' own words in F 28, lines 10-14), this is explicitly stated in *Metaphysics* 1080 B 27-28 (= F 33), 1083 A 21-22 (= F 34), 1086 A 3-5 (= F 35), 1090 A 7-9 (= F 36).

⁵⁴ Cf. F 29a, F 30-37, F 41, F 53. Cf. also the implications of F 28, lines 10-14, F 61a-b, and F 72-74.

a) *Numbers*

In order to understand Speusippus' conception of separately existing mathematical numbers and the probable reasons that led him to adopt it, it is necessary to give a short account of the different views of number held by Plato, Speusippus, Xenocrates, and Aristotle; and, since Plato believed in separately existing ideal numbers, one must briefly discuss the theory of ideas also.

For Plato the ideas are the hypostatization of all the universals. To each kind of thing to which we apply a common name there corresponds a single eternal and unchangeable idea which exists outside of time and place.⁵⁵ Each idea is a perfect individual existing by itself,⁵⁶ apart from the many particulars that "participate" in it or "imitate" it⁵⁷ and from the corresponding concept in the mind.⁵⁸ The ideas, not the particulars, which are involved in change, are the true objects of thought and knowledge.⁵⁹ If we apprehend particular things at all, it is only because they receive from the ideas whatever reality they have.⁶⁰ In accordance with the motivation of the theory, there are ideas not only of natural entities (e.g. man, horse, etc.) but also of artefacts (e.g. bed, table, etc.),⁶¹ of abstractions such as "being," "identity," "difference," etc.,⁶² of actions and of passive states such as "motion" and "rest,"⁶³ of relations such as "equality," "master," "slave," etc.,⁶⁴ and therefore also of numbers, i.e. an ideal Two, an ideal Three, and

⁵⁵ Cf. Plato, *Phaedo* 75 C-D and 76 D-E, *Republic* 596 A, *Parmenides* 132 A, Aristotle, *Metaphysics* 987 B 1-10. On the ideas as timeless and non-spatial entities cf. *Symposium* 211 A 7-B 5, *Phaedrus* 247 D 6-E 2, *Timaeus* 37 E-38 A and 52 A-C.

⁵⁶ In addition to the passages cited in the previous note cf. Plato, *Phaedo* 78 D, *Philebus* 15 A-C, 16 D-E.

⁵⁷ On the equivalence of the several idioms Plato employs to designate the relation of the particulars to the ideas cf. *Phaedo* 100 D 4-8 and Cherniss, *AJP* 78 (1957), pp. 247-266 = *Selected Papers*, pp. 320-339.

⁵⁸ Cf. the refutation of conceptualism in Plato, *Parmenides* 132 B-C.

⁵⁹ Cf. esp. *Timaeus* 27 D-28 A with 48 E-52 D, esp. 51 B-E.

⁶⁰ Cf. the previous note and *Republic* 475 E-480 A.

⁶¹ Cf. *Cratylus* 389 A-B, *Republic* 596 B and 597 C.

⁶² Cf. esp. *Sophist* 251 C-252 E and 254 B-255 E.

⁶³ In addition to the passages cited in the previous note cf. *Sophist* 248 A-249 D with Cherniss, I, pp. 437-439 and *AJP* 78 (1957), pp. 238-239 = *Selected Papers*, pp. 311-312.

⁶⁴ Cf. e.g. *Phaedo* 74 A, *Parmenides* 133 D-E. On relative terms cf. also *Republic* 438 B-E, with Shorey's notes (*Rep.* I, pp. 390-394), and Cornford, *Plato's Theory of Knowledge*, pp. 282-284.

so on.⁶⁵ These ideal numbers are not congeries of units, for each as an idea is a perfect unity which, like every other idea, has no parts, is not derived from any principles, and is not in any sense whatever the product of any other idea or element. Each exists by itself, outside the limitations that space and time impose upon phenomenal existence. There is no single idea of number as such; ideal number is simply all the ideal numbers from two to infinity.⁶⁶ The ideal two and the ideal three, for example, are not, respectively, two units and three units, nor is the number five the sum of two and three. These numbers are just Twoness, Threeness, and Fiveness, each being a unity which is irreducibly itself and nothing else. This means, in Aristotle's words, that each number is *essentially different* from every other number.⁶⁷ Plato's ideal numbers are then the necessary consequence of the theory of ideas; but *qua* numbers they are really the natural numbers.

The characteristic of ideal numbers mentioned above may be summarized as the "cardinal" aspect of number; and there is direct evidence for it in the Platonic dialogues.⁶⁸ But Plato also thought that the ideal numbers are an ordered series. This "ordinal" aspect of the ideal numbers is not explicitly discussed in his works; but, apart from incidental references to it in the dialogues, we may also infer it from the application to numbers of some general tenets of the theory of ideas. According to Plato we "recollect" the pre-natal knowledge of any idea when we apprehend the corresponding particular which participates in it.⁶⁹ Now phenomenal numbers, i.e. those composed of sensible units and those composed of abstract monads,⁷⁰ stand to one another in the relation of prior to posterior;

⁶⁵ On Plato's theory of ideal numbers or ideas of numbers cf. esp. *Phaedo* 96 E-97 B with 101 B-C, *Republic* 525 C-526 B, *Cratylus* 432 A-D; *Philebus* 56 D-57 A; J. Cook Wilson, *CR* 18 (1904), pp. 247-260, esp. 249-251, 257; Ross, *Aristotle's Metaphysics*, II, p. 427; Cherniss, *Riddle*, pp. 34-37, *AJP* 68 (1947), p. 238, n. 79 = *Selected Papers*, p. 189.

⁶⁶ Cf. p. 15 with note 75 *infra*. On Plato's notion of two as the first number cf. p. 276 *infra*.

⁶⁷ Cf. *Metaphysics* 1080 A 17-18.

⁶⁸ Cf. the Platonic passages cited in note 65 *supra*.

⁶⁹ Cf. *Meno* 85 D-86 B, *Phaedo* 72 E-76 E, 91 E, *Phaedrus* 249 B-C, *Timaeus* 41 E-42 D with Cornford, *Plato's Cosmology*, pp. 144-146, *Politicus* 277 D 2-4 and 278 C-D with Shorey, *The Unity of Plato's Thought*, pp. 43-44. Cf. Cherniss, I, p. 47 and n. 36 with further references.

⁷⁰ In Plato's theory there are only two kinds of number: ideal and phenomenal (cf. *Republic* 525 D, *Philebus* 56 D-57 D, and note 65 *supra*). Hence,

we see this when we count. Since phenomenal numbers participate in, or imitate, the ideal numbers,⁷¹ it follows that also the ideal numbers have a relation of prior and posterior to each other, a relation which must be independent of the fact that phenomenal numbers are congeries of units.⁷² Otherwise, according to Plato, we should not have been able to count. Aristotle refers more than once to the "ordinal" aspect of the ideal numbers, explicitly stating that they stand to one another in the relation of prior to posterior,⁷³ that the ideal two is the first number, the ideal three the second number,⁷⁴ and that the Platonists did not posit a general idea of number precisely because numbers stand to one another as prior to posterior.⁷⁵ It is, among others, these ideal numbers that Aristotle calls "incomparable or inassociable numbers" (ἀσύμβλητοι ἀριθμοί),⁷⁶ for they cannot be added, subtracted, multiplied, etc. In short, then, Plato's ideal numbers are the hypostatization of the series of natural numbers. Unfortunately, this important conception of number was not understood by Speusippus, Xenocrates, and Aristotle, nor by the ancients generally.

for him abstract denominative numbers (i.e. the numbers composed of abstract units on which we perform operations such as adding, multiplying, etc.) are merely phenomenal numbers (or "bodily" numbers). The intermediate mathematical (numbers and magnitudes) which Aristotle often ascribes to him (cf. *Metaphysics* 987 B 14-18, 995 B 15-18, 1028 B 19-21, 1080 B 11-14, etc.) are not found in the dialogues but are in all probability the result of Aristotle's interpretation of Plato's theory in the light of his own conception of the intermediacy of mathematical (cf. Cherniss, *Riddle*, pp. 75-78). Nor does Aristotle himself consistently ascribe to Plato the intermediate mathematical: for in *Metaphysics* 990 A 29-32 he says that Plato recognized two kinds of number, ideal and "sensible," and in his *Περὶ ἰδεῶν* he reported two Academic arguments the purpose of which was to show that the objects of mathematics are ideas (cf. note 111 *infra*).

⁷¹ This follows not merely from the general tenets of the theory of ideas but also from *Phaedo* 101 B-C and *Cratylus* 432 A-D.

⁷² Cf. *Cratylus* 432 A-D. This passage states that each phenomenal number participates in the corresponding ideal number and that the quantitative aspect of the former is a derogation of the ideal unity of the latter. The ideal numbers, then, must have a serial order, just as the phenomenal numbers have.

⁷³ Cf. *Metaphysics* 1080 A 15-18 with 23-30 and 33-35, 1080 B 11-12. (On Aristotle's mistaken notion that Plato's numbers are congeries of units cf. pp. 16-18 *infra*.)

⁷⁴ Cf. *Metaphysics* 1081 B 30-31, 1082 B 19-23.

⁷⁵ Cf. *Eth. Nic.* 1096 A 17-19 with the introductory note to F 47a.

⁷⁶ Cf. the references to Cook Wilson, Ross, and Cherniss in note 65 *supra* and p. 17 f. *infra*.

And so it was left to logicians and mathematicians in the nineteenth and twentieth centuries to rediscover, from points of view different from Plato's, the conceptual priority of the cardinal numbers.⁷⁷

What is common to Speusippus, Xenocrates, and Aristotle is that they all conceive numbers to be congeries of units.⁷⁸ But there is no evidence that Speusippus objected to the notion of ideal number as such. Rather, from Aristotle's testimony it appears that his rejection of ideal number was merely the consequence of his having rejected the separate existence of *all* ideas⁷⁹ because of the epistemological and ontological difficulties he saw in them.⁸⁰ In any case, he could not have objected to the "separation" of the ideal numbers, since he himself believed in the separate existence of mathematical numbers. For him each number is a congeries of abstract units or monads, what Aristotle calls the number of the mathematicians; that is to say the number with which the mathematician performs arithmetical operations such as counting, adding, multiplying, etc. To this extent Aristotle agrees with Speusippus, for he, too, thinks

⁷⁷ Cf. G. Frege, *Die Grundlagen der Arithmetik* (Breslau, 1884); B. Russell, *The Principles of Mathematics* (Cambridge, 1903), pp. 111-116 and *Introduction to Mathematical Philosophy* (London, 1919), pp. 11-19; Kneale, *The Development of Logic*, pp. 455-477; W. V. O. Quine, *Set Theory and Its Logic*² (Cambridge, Mass., 1969), pp. 28-29 and 74-85. Of course Plato's ideal numbers are not sets but individuals, and so his conception of number is essentially different from that of Frege and others.

⁷⁸ On Aristotle's conception of mathematical number as the only kind of number and on numbers as congeries of abstract and undifferentiated monads cf. *Metaphysics* M. 6-9, esp. 1080 A 21-23, 30-33, 1081 A 5-7, 1082 B 1-9, 1083 B 19-23, etc. On his doctrine of mathematical as existing potentially in the sensibles and being actualized in thought by abstraction cf. *Metaphysics* M. 2-3. On Xenocrates' numbers cf. note 86 *infra*.

On Speusippus' doctrine of separately existing mathematical numbers cf. F 30, F 33-36. Aristotle testifies that Speusippus' numbers are congeries of abstract and undifferentiated monads, cf. *Metaphysics* 1080 A 21-23 with 1080 B 14-16 (= F 33) and 30-31 (cf. comm. on F 33, lines 8-9), 1083 A 23-35 = F 34 with comm. *ad loc.* etc. Rabinowitz, *Aristotle's Protrepticus*, I, p. 88 and n. 137 denies this, apparently on the ground that Speusippus' numbers as transcendental entities which he substituted for Plato's ideas must be in-composite. But, apart from Aristotle's testimony, Speusippus' own words in F 28 show that he failed to grasp the notion that numbers are not aggregates of units, for he there refers to one and the same number using indifferently the singular and the plural, the masculine and the neuter, etc. (cf. e.g. F 28, lines 15, 22-23, 31, 39-40 with Kneale, *op. cit.* [note 77 *supra*], p. 392).

⁷⁹ Cf. *Metaphysics* 1080 B 27-28 = F 33, with comm. *ad loc.*, 1083 A 21-22 = F 34, with comm. *ad loc.*, 1086 A 3-5 = F 35, with comm. *ad loc.*, 1090 A 7-9 = F 36, with comm. *ad loc.*

⁸⁰ Cf. pp. 62-64 *infra*.

that numbers are merely congeries of abstract units. But precisely because of this he rejects Speusippus' notion that mathematical number has separate existence. Aristotle maintains that numbers exist immanently in the sensibles and can be actualized only in thought, for they are "separable" only by abstraction.⁸¹ Thus, "two" is two abstract units; when we add another unit we obtain "three"; and so on. Since these units are all homogeneous and undifferentiated, each number is nothing *apart* from them; and the units themselves are merely the result of abstraction. According to Aristotle, any other properties that numbers may have are dependent upon, or derived from, their purely quantitative aspect.⁸² For him numbers as forms are intermediate between the pure forms (the unmoved mover and the celestial movers) and the sensible entities.⁸³ But there is an essential difference between the mathematical and the other intermediate forms. Take for example the forms "man" and "two." The former is found in any particular man as a concretion of form and matter; but the number two never appears as a particular thing as such. When we say "two apples," we are merely counting two particular apples. When we abstract "apples" we get two abstract monads which we count as "two." In fact, Aristotle is so thoroughly convinced that number is just denominative number that he even fails to see that Plato's ideal numbers are *not* congeries of units and always criticizes them as if they were just that. Thus, in *Metaphysics* 1080 A 15-37 he offers an exhaustive *a priori* classification of number from the point of view of the component units: (a) incomparable numbers with units all incomparable; (b) mathematical number with units all comparable; (c) incomparable numbers with the units of each number comparable with one another but incomparable with those of other numbers.⁸⁴ He then says that nobody has ever held (a);⁸⁵ and so in 1080 B 11-14 he tacitly identifies Plato's ideal numbers with (c), a conception he clearly ascribes to Xenocrates, and which there is every reason to believe was his.⁸⁶ In the rest of *Metaphysics* M

⁸¹ Cf. note 78 *supra*.

⁸² Cf. *Metaphysics* 1083 A 1-11 and p. 59 *infra*.

⁸³ Cf. *Metaphysics* 1026 A 13-16, Ross, *Aristotle's Physics*, p. 548, *Aristotle's Metaphysics*, II, p. 197.

⁸⁴ Cf. the introductory note to F 33 with note 95 there.

⁸⁵ Cf. *Metaphysics* 1080 B 8-9, 1081 A 35-36.

⁸⁶ On Xenocrates' numbers as congeries of units such as (c) and on his

Aristotle fails to distinguish between Plato's and Xenocrates' radically different conceptions of number. And neither there nor anywhere else in his extant works and fragments⁸⁷ does he mention Plato's view that numbers are not congeries of units. Nevertheless, leaving aside the question of the identification of *all* ideas with numbers, which he sometimes ascribes to Plato,⁸⁸ the implication of Aristotle's testimony is that Plato identified the ideas with the ideal, non-mathematical numbers. For in 1080 B 11-14 and in other passages, too,⁸⁹ he says that Plato posited both ideal numbers and mathematical numbers, the latter being intermediate between the ideas and the sensibles. From this it ought to be clear that according to Aristotle Plato identified the ideas with the former kind of numbers. These, however, are the same as the ideal numbers of the earlier theory of ideas Aristotle himself ascribes to Plato, i.e. with the ideal numbers of the dialogues. For everything Aristotle says of the ideal, non-mathematical numbers of the later theory is also true of those of the earlier one, including his mistaken notion that Plato's non-mathematical numbers are congeries of units.⁹⁰

Xenocrates, for his part, wishing to retain the ideas but impressed by Aristotle's objections to Plato's ideas and ideal numbers, and also to Speusippus' separately existing mathematical numbers, posited the separate existence of numbers such as (c) above. He identified all ideas with these numbers (= idea-numbers)⁹¹ and asserted that the idea-numbers are mathematical numbers.⁹² This doctrine is severely but correctly criticized by Aristotle,

identification of the ideas with these numbers, which he called mathematical numbers, cf. *Metaphysics* 1028 B 24-27 with introductory note to F 29a and note 85 there, 1069 A 35 with Ross' note on 1069 A 34-36, 1076 A 20-21 with Ross' note *ad loc.*, 1080 B 22-23 and 28-30, 1083 B 1-8, 1086 A 5-11, 1090 B 20-32. Cf. further Ross, *Aristotle's Metaphysics*, I, pp. LXXIV-LXXV.

⁸⁷ Cf. Aristotle, *De Philosophia*, frag. 9 (Rose).

⁸⁸ Cf. *Metaphysics* 987 B 10-988 A 17 with Cherniss, I, pp. 180-184. But Aristotle does not always ascribe such an identification to the "old Plato;" the likelihood is that Plato's alleged identification of all ideas with numbers is the result of Aristotle's reconstruction of the necessary implications of Plato's theory (cf. Cherniss, *Riddle*, pp. 26-28, 40, 47-48, and 58-59).

⁸⁹ Cf. note 70 *supra*.

⁹⁰ Cf. J. Cook Wilson, *op. cit.* (note 65 *supra*), esp. p. 257; Ross' note on *Metaphysics* 1086 A 4; Cherniss, I, pp. 513-524.

⁹¹ Cf. note 86 *supra*.

⁹² Cf. note 86 *supra*.

who contends that it is worse than Plato's ideal, non-mathematical numbers and than Speusippus' separately existing mathematical numbers. For Xenocrates' view is obnoxious to the objections he raises against both Plato and Speusippus, and, in addition, destroys the very nature of mathematical number.⁹³ For our purpose here it is important to note that Xenocrates, in explicitly identifying his idea-numbers with mathematical numbers, was in all probability trying to offer a compromise between Plato's and Speusippus' radically different views of number. Otherwise, there would be no reasonable explanation of why he asserted that numbers such as (c) are mathematical numbers and also idea-numbers. It is clear, then, that all three, Speusippus, Xenocrates, and Aristotle failed to understand the significance of Plato's conception of number.

In their theories of number, Plato, Speusippus, Xenocrates, and Aristotle have all failed to take account of zero. This shortcoming is not peculiar to them, for zero came to the Greeks from the Babylonians, in all probability not earlier than ca. 300 B.C. and perhaps later than that date.⁹⁴ When we consider what these thinkers thought about the first number, however, it becomes clear that

⁹³ Cf. esp. *Metaphysics* 1083 B 1-8, 1086 A 5-11, and 1090 B 20-32.

⁹⁴ Zero is in full use in Babylonian texts from 300 B.C. on. In astronomical texts it is used as a separation mark and to indicate an empty place, and it is also used so in Greek astronomical texts. There is no evidence for the widespread notion that ο (= zero) is merely the first letter of the Greek word οὐδέν (e.g. A. Rey, *REG* 48 [1935], p. 529). It is simply an arbitrary symbol invented to indicate an empty place and corresponds to the Babylonian symbol for zero (cf. O. Neugebauer, *The Exact Sciences in Antiquity*² [Providence, 1957], pp. 10-14 and 27-28, who also points out that in a Babylonian table of squares, tentatively dated to ca. 500 B.C., there are four cases of a zero "written exactly like 30"). To the best of my knowledge the first occurrence of zero in a Greek astronomical text is in Hypsicles, *Anaphorikos*, lines 133, 155-162 (de Falco), ca. 150 B.C. For zero as a number in Greek mathematics cf. Iamblichus, *In Nicom. Arith. Introduct.*, pp. 16, 4-11 and 19, 8-14 with Tannery, *Mém. Sc.*, II, p. 196. Since Iamblichus is not an original mathematician, and since so much of Greek mathematical writing is lost, it is likely that this use of zero is earlier than him. However, it certainly cannot go back to Aristotle, as C. B. Boyer, *American Mathematical Monthly* 50 (1943), pp. 487-491 claims that it does, for *Physics* 215 B 12-22 does not imply, *pace* Boyer, division by zero. Aristotle there is simply denying that there is any ratio between "nothing" and number (τὸ μὴδὲν πρὸς ἀριθμὸν); this, if anything, implies that "nothing" is not a number; and Aristotle's rejection of the *possibility* of any ratio in this case is made clear by his use of μὴδὲν instead of οὐδέν. Surely the fact that Aristotle, like any other Greek, could even say that 5-5 = οὐδέν is not evidence that he had any notion that zero is a number. In fact, Aristotle even explicitly denied that one is a number (cf. the following note).

only Speusippus held the correct view that one is a number. Plato, Xenocrates, Aristotle, and most of the ancients considered two to be the first number.⁹⁵ Though we have in his own words an argument of Speusippus which unambiguously implies that for him one is *the first odd number*, the implications of this text have escaped all modern scholars with the exception of Cherniss, whose interpretation, however, has been either ignored or neglected by almost all recent critics.⁹⁶ As a result of this students of the early Academy and of Aristotle have misunderstood some basic tenets of Speusippus' thought and the validity of several of Aristotle's criticisms of our philosopher.

We have only one extensive verbatim quotation of Speusippus. In it, as well as in the rest of the second part of his treatise "On Pythagorean Numbers," from which the quotation comes, he strongly emphasizes the perfection of the decad.⁹⁷ He stresses the properties of the numbers from one to ten and those that derive from the fact that ten is the sum of the first four numbers ($1 + 2 + 3 + 4 = 10$). Aristotle, for his part, sometimes criticizes the Platonists either for limiting the numbers to the decad or for failing to make it clear whether they so limit the numbers or not.⁹⁸ Though these passages do not specifically refer to Speusippus,⁹⁹ we must discuss his view of the decad and also its implications, because some scholars think that he ascribed mystical properties to it. For Speusippus, however, the first ten numbers are not a kind of substance different from that of the other numbers. Nor can the decad have ontological priority over any other number, since he held that mathematical number as such is the first kind of substance.¹⁰⁰

⁹⁵ Cf. the references in p. 276 *infra*. In view of Aristotle's explicit argument that one is not a number (e.g. *Metaphysics* 1088 A 6-8), it would be interesting to know the evidence for Barnes' statement (*Aristotle's Posterior Analytics*, p. 230) "Often, *though not invariably*, Aristotle supposes that one is not a number" (italics are mine). Aristotle never considers one to be a number and for him the first number is two. Of course he, like anybody else who is able to count, cannot avoid using the number one; but that is not the same thing as crediting him with the notion that one is a number.

⁹⁶ Cf. F 28, lines 18-22 with comm. *ad loc.*

⁹⁷ Cf. F 28, lines 10-62.

⁹⁸ Cf. *Physics* 206 B 32-33, *Metaphysics* 1073 A 17-22, 1084 A 12-B 2, 1088 B 10-11.

⁹⁹ But cf. *Metaphysics* 1085 B 23-24 = F 40 with note 137 there.

¹⁰⁰ On mathematical numbers as Speusippus' first entities cf. *Metaphysics* 1028 B 21-24 = F 29a with pp. 21-24 *infra*, 1075 B 37-38 = F 30, 1080 B 14-16 = F 33, 1083 A 23-24 = F 34.

Moreover, Speusippus could hardly have thought that the numbers after ten are in any sense whatever derived from the decad, for he posited the separate existence of *all* mathematical numbers and believed that they are the unchangeable objects of knowledge and that the mind apprehends them directly.¹⁰¹ He emphasized the properties of the decad because he saw the presence of number in all the other substances that he posited,¹⁰² and because he found in the decad the basic properties of, and relations between, all numbers.¹⁰³ The perfection of the decad has to do with the decimal system, not with any alleged mystical properties. And in the universality of the decimal system Speusippus saw evidence for his view of number as what we may call an innate notion in the mind.¹⁰⁴

From Aristotle's testimony we may gather some of the reasons why Speusippus posited the separate existence of numbers. To begin with, it appears that he remained enough of a Platonist to think that the objects of knowledge must be eternal and unchangeable entities.¹⁰⁵ He must therefore have rejected conceptualism.¹⁰⁶ Secondly, he believed that the sensible particulars cannot be the objects of arithmetic and geometry, for him the only sciences in the strict sense,¹⁰⁷ because the propositions of mathematics are not true of the sensibles.¹⁰⁸ Finally, he thought that the mind must have *direct* knowledge of some kind of eternal and immutable

¹⁰¹ In addition to the passages cited in the previous note cf. F 31-32, F 35-36. On numbers as directly apprehended by the mind cf. *Metaphysics* 1090 A 35-B 1 = F 36 with comm. *ad loc.* and F 73-74 with comm. on F 72-74.

¹⁰² On the decad as the pattern of the whole of existence cf. F 28, lines 10-14 where n.b. φυσικωτάτην and παράδειγμα. Cf. further the whole comm. on these lines.

¹⁰³ Cf. F 28, lines 17-38 and n.b. lines 24-25 πρὸς μὲν αὐτῶν ὁ δέκα with comm. on F 28, line 24, etc.

¹⁰⁴ Cf. F 28, lines 14-17 with comm. on F 28, lines 15 and 15-17, and note 101 *supra*.

¹⁰⁵ Cf. notes 100-101 *supra*.

¹⁰⁶ This inference follows from Speusippus' having posited mathematical numbers themselves as separate and direct objects of knowledge, cf. notes 53-55, 100-101 *supra*.

¹⁰⁷ This follows from the fact that Speusippus posited mathematical numbers and magnitudes as the only separate objects of knowledge, cf. F 31-32 with F 36 and F 72-74. Cf. also comm. on F 36 and on F 72-74.

¹⁰⁸ Cf. *Metaphysics* 1090 A 10-15, 25-30, 35-B 5 = F 36, with comm. *ad loc.* and pp. 24-27 *infra*, F 72 with comm. on F 72-74.

entities from which it can derive all other knowledge.¹⁰⁹ These entities according to Speusippus are the numbers.¹¹⁰ Similar arguments Plato gave in support of the separate existence of ideas.¹¹¹ Speusippus, though he rejected the ideas, retained as much of Plato's arguments as was compatible with his own philosophy.

There remains the question why he substituted numbers for the ideas. Like Plato and Aristotle, Speusippus thought that without some kind of direct knowledge all knowledge and thought are impossible. There is evidence to support the inference that he postulated direct knowledge of numbers, not of magnitudes, as we shall see, because of the epistemological and ontological priority of the integers to any other kind of entity. Aristotle states that for Speusippus numbers are the first entities and that he considered the principles of magnitude to be similar to those of number. For the point is like the One and the second principle of magnitude is like multiplicity, which is the second principle of number, but not identical with it.¹¹² In F 28, the report about the priority and self-subsistence of the decad, which in all probability reproduces closely Speusippus' own terminology, uses wording strongly reminiscent of that which Plato employs in the *Timaeus* to describe the ideas.¹¹³ In the verbatim quotation included in this very fragment Speusippus himself speaks of magnitudes as "imitating" or being similar to numbers.¹¹⁴ Moreover, he associates the point with one, the line with two, the triangle (the first plane) with three, and the pyramid (the first solid) with four.¹¹⁵ And so in magnitudes Speusippus sees the presence of the decad, since

¹⁰⁹ Cf. *Metaphysics* 1090 A 35-B 1 = F 36, with comm. *ad loc.*, F 73-74 with comm. on F 72-74, and pp. 53-64 *infra*.

¹¹⁰ Cf. notes 100-101 *supra* and the implications of F 28, lines 10-62.

¹¹¹ For the ideas as separately existing and immutable objects of knowledge cf. notes 55-56 and 58 *supra*. That the ideas are known directly follows from the theory of recollection, cf. note 69 *supra*. Two Academic arguments to establish the existence of ideas are noteworthy: one is that the correlate of number must be real and therefore ideas (cf. Alexander, *In Metaphysica*, p. 78, 16-17); the other is the argument from the real objects of geometry (cf. Alexander, *op. cit.*, p. 79, 13-15). On these arguments, both of which go back to Aristotle's work *On the Ideas*, cf. Cherniss, I, pp. 496-498.

¹¹² Cf. *Metaphysics* 1085 A 32-34 = F 51, *Topics* 108 B 26-31 = F 65.

¹¹³ Cf. comm. on F 28, lines 10 (φυσικωτάτην), 11-12, and esp. 13-14.

¹¹⁴ Cf. F 28, lines 46-47, 55, 58, 59.

¹¹⁵ Cf. F 28, lines 33-36 with comm. *ad loc.*, F 28, lines 38-40 and 60-62.

$1 + 2 + 3 + 4 = 10$.¹¹⁶ Magnitudes, therefore, presuppose numbers, not vice versa, though Speusippus did also postulate some sort of "correspondence" between magnitudes and certain kind of numbers, the so-called figurate numbers.¹¹⁷ We may also infer that neither the soul nor the sensibles can be direct objects of thought. In fact, they cannot even be unchangeable objects of knowledge, since both the soul and the sensibles are involved in change. Moreover, our apprehension of them presupposes knowledge of the separately existing numbers and magnitudes.¹¹⁸ Thus, Speusippus thought that, with the exception of numbers, magnitudes, and perhaps also the soul, any entity is *like a point*; it is merely the focus of all the relations that make it different from everything else.¹¹⁹ In short, given his assumptions that there must be direct knowledge and that this knowledge must be of separately existing and eternal entities, and his rejection of the ideas as the hypostatization of all universal concepts, Speusippus was led by epistemological and ontological considerations to postulate the mind's direct knowledge of the separately existing mathematical numbers.

Speusippus' numbers, then, are not mere abstractions or concepts but individual entities which, like Plato's ideas, exist outside of time and place.¹²⁰ This doctrine, however, is impossible to reconcile with the notion that each number is a congeries of homogeneous and undifferentiated monads (= mathematical number). If, for

¹¹⁶ In addition to the passages cited in the previous note cf. F 28, lines 40-43 (ten in the triangle) and 43-60 (ten in the four kinds of pyramids).

¹¹⁷ Cf. F 28, lines 5-7 with notes *ad loc.*, F 28, line 9 with comm. *ad loc.*, and F 28, lines 33-36 with comm. *ad loc.*

¹¹⁸ Cf. F 29a and pp. 53 ff. *infra*.

¹¹⁹ Cf. Aristotle, *Metaphysics* 1044 A 7-8 = F 66a with comm. on F 66a-b, *Anal. Post.* 97 A 7-11 = F 63a with comm. *ad loc.* and pp. 56-58 *infra*.

¹²⁰ Cf., with the corresponding remarks in the text, notes 53-54, 78-79, 100-102, 106-109 *supra*.

To avoid misunderstanding, it is necessary to say that Aristotle does *not* ascribe to Speusippus Plato's alleged intermediate mathematical. For he reports that Speusippus postulated the separate existence of mathematical numbers and magnitudes (cf. F 29a-F 38; F 50, F 51, F 53) and that he substituted mathematical for Plato's ideas (cf. F 33-36) as the unchangeable and separately existing objects of knowledge (cf. F 36 and also F 28, lines 10-14). All this shows that Speusippus' numbers and magnitudes are unique individuals. For example, there is only one separately existing mathematical "three" and not many "three's," as is the case with the intermediate mathematical Aristotle ascribes to Plato. Moreover, Speusippus' mathematical cannot be "intermediate," since he did not believe in the separate existence of ideas and postulated numbers as the first entities (cf. F 30, etc.).

example, two and three are nothing but two and three such monads, how could these numbers have separate existence and be two different entities? For it appears that each such number is nothing apart from the component units; but it is impossible to differentiate the two units in two from any of the units in three. If numbers were nothing but congeries of abstract and undifferentiated monads, Aristotle would be right in thinking that these numbers cannot have separate existence but can be actualized only in thought. It is precisely on this ground that he criticizes Speusippus in *Metaphysics* 1083 A 24-36 (= F 34). For he there implies that the very notion of separately existing mathematical numbers is a contradiction in terms. If numbers have separate existence, there must be not only a first One, as Speusippus said, but also a first Two, a first Three, etc. For to exist apart any number would have to be a different entity from any other separately existing number, and this would mean that each number is "incomparable" with every other number. Mathematical number, however, cannot be incomparable, since the component units are all comparable and undifferentiated. And so Aristotle faces Speusippus with the following dilemma: either one admits that mathematical number is the only kind of number and that it cannot have separate existence, or one postulates the separate existence of incomparable numbers as Plato did.¹²¹ However, when he claims to have already refuted Plato's theory of incomparable numbers, one must say that he has done so only because he mistakenly believes that Plato's ideal numbers are congeries of units.

His own doctrine of mathematical leads Aristotle to reject one of Speusippus' arguments in support of the separate existence of mathematical numbers and magnitudes and to raise a difficulty which, he believes, Speusippus' theory cannot solve. According to Aristotle, the propositions of mathematics are true also of the sensibles, and so there is no reason to separate the mathematical. Moreover, mathematical properties could not be present in the sensibles, if mathematical truly existed apart from them.¹²² Though this last part of the argument depends upon his own doctrine of matter and form, of potentiality and actuality, and of abstraction, and though he does elsewhere raise somewhat similar

¹²¹ Cf. comm. on F 34.

¹²² Cf. comm. on F 36 with note 120 there.

difficulties against the partisans of ideas,¹²³ Aristotle believes that Speusippus is especially vulnerable to this objection. More so than those who posit idea-numbers; for the latter, since they think that each number is an idea and that the idea is somehow the cause of being to other things, at least attempt to offer some explanation for postulating numbers as causes.¹²⁴ But Speusippus' doctrine of separately existing mathematical numbers prevents him from assigning to them any rôle as causes; and so Aristotle contends that they are useless and asserts that even Speusippus himself did not claim that numbers are causes.¹²⁵ These two, then, are different objections. However, because they are related to one another in Aristotle's argument, and because the answers to each from Speusippus' point of view are also related, they must be discussed together.

For Aristotle numbers cannot be final, efficient, or formal causes of anything. (It is obvious that they cannot be material causes, nor would Speusippus and the Platonists generally claim that they are.) Numbers are not final causes because they are not objects of desire for anything. Of all the Platonists Speusippus is singled out by Aristotle as being especially liable to this objection, since he did not posit a single and separate final cause for the whole universe.¹²⁶ What is worse is that he even denied the predicate goodness to the One; and Aristotle takes Speusippus' One as the entity equivalent to his own unmoved mover.¹²⁷ Nor can numbers be efficient causes, for they do not originate any kind of motion or change.¹²⁸ Neither as mover nor as form can number be the cause of magnitude; for a continuous magnitude cannot be the product of number, since numbers are discrete entities.¹²⁹ In short, mathematical numbers cannot be the cause or the substance of anything.¹³⁰ But, though Speusippus' numbers are not causes in Aristotle's

¹²³ Cherniss, I, pp. 235 ff., 376 ff.

¹²⁴ Cf. *Metaphysics* 1090 A 2-7 = F 36, with comm. *ad loc.* and note 121 there.

¹²⁵ Cf. *Metaphysics* 1090 A 10-13 = F 36 and 1075 B 27-28 (cf. introductory note to F 30).

¹²⁶ Cf. *Metaphysics* 1075 B 37-1076 A 4 = F 30 with introductory note and comm. *ad loc.*, F 42a, F 44, F 45a, F 46a, and this chapter, section f *infra*.

¹²⁷ Cf. F 44 and F 46a with introductory notes and comm. *ad locc.*

¹²⁸ Cf. *Metaphysics* 1075 B 28.

¹²⁹ Cf. *Metaphysics* 1075 B 28-30 with 1085 B 30-34 (= F 51).

¹³⁰ Cf. notes 125-129 *supra*.

sense, it does not follow that his conception has been refuted. For he thought that numbers, magnitudes, the soul, and the sensibles are different kinds of substances, each of which has its own peculiar principles. Between the substances and between their respective principles, however, he postulated a relation of similarity.¹³¹ Thus, for example, he saw the presence of number in magnitudes. According to Speusippus we would not know what the point and the line are unless we first knew the numbers one and two;¹³² and for him this knowledge of the integers requires, as we have seen, the separate existence of numbers and the mind's direct apprehension of them.¹³³ Similarly, we could have no knowledge of the sensibles unless we first know numbers and magnitudes and the universal concepts derived from them.¹³⁴ Aristotle rejects Speusippus' conception of similarity; but his argument against numbers as causes depends upon the validity of his objection to his adversary's notion of similarity. This question will be discussed in the next chapter. We may state even here, however, that to judge from those aspects of Speusippus' thought about which we have some reliable information, namely the relation of numbers to magnitudes, Speusippus is closer than Aristotle to being right. And so numbers, though they are neither causes nor substances of anything else, are not as useless as Aristotle believes.¹³⁵

Concerning Aristotle's objection that the separate existence of numbers and magnitudes is incompatible with the presence of their properties in the sensibles, one may say that Speusippus' doctrine of similarity provides an explanation for what Aristotle sees as the presence of the attributes of numbers and of magnitudes in the sensibles themselves. To give but one example, Speusippus would say that I know this table is triangular because I know what a triangle is, and that this requires knowledge of number also, in as much as the triangle is associated with the number three. But against Aristotle's own view of mathematical Speusippus could

¹³¹ Cf. F 28, line 9 with comm. *ad loc.*, F 28, lines 33-36 with comm. *ad loc.*, F 28, lines 38-62; F 29a, F 30, F 51, F 65, F 66a.

¹³² On the similarity of the point to the One (or the number one, cf. section c of this chapter) cf. F 28, lines 38-40; F 51; F 65. On two and line cf. F 28, lines 61-62. For both cf. the implications of F 28, lines 33-36 (see comm. *ad loc.*).

¹³³ Cf. notes 100-101 *supra*.

¹³⁴ Cf. pp. 53-58 *infra*.

¹³⁵ Cf. pp. 61-64 *infra*.

himself raise a serious objection. He could argue that the properties of numbers and magnitudes are *not* in all strictness found in the sensibles. The necessary propositions of mathematics are not true of the sensibles but only of the abstract numbers and magnitudes which for Speusippus must exist apart from them. This point would be admitted even by someone who denied the separate existence of mathematical, and it is also valid independently of Speusippus' failure to understand the true nature of number. In fact, it appears that Aristotle, in his eagerness to reject the Platonists' separation of numbers and magnitudes, has adopted a view of mathematical difficult to reconcile even with his doctrine that actual knowledge is of universals.¹³⁶

Related to his notion that numbers are not causes is another objection Aristotle raises against Speusippus: his theory fails to account for the unity of substance, including that of number itself, and of definition.¹³⁷ Since this objection, however, is connected with several epistemological doctrines of Speusippus, it will be discussed in the next chapter. The rest of his criticism of Speusip-

¹³⁶ Aristotle's doctrine that actual knowledge is of universals only (cf. *Metaphysics* 1003 A 13-15, 1060 B 19-21, 1086 B 5-6 and 32-37, *De Anima* 417 B 22-23), that any potentiality must be derived from a prior actuality (*Metaphysics* 1049 B 24-27), and that there must be something else besides the sensibles if indeed knowledge is different from sensation (cf. Cherniss, I, n. 131 and pp. 237-239) has serious and perhaps insurmountable difficulties when one considers the question of knowledge of the universals in general and of the categories (cf. Cherniss, I, pp. 71-80, 338-352, 468-470 and Tarán, *Gnomon* 45 [1973], pp. 754-756). But in the case of mathematical knowledge the difficulties are truly insurmountable. For, just to mention one, what is the actuality that enables the mind to know a given mathematical form, e.g. the circle? Surely, in this case it is not the circles in bronze or wood; nor can it be the mathematical circles, either (for this distinction cf. *Metaphysics* 1036 A 2-8), for the latter are abstractions of the former and the former have only potential existence. In short, in the case of mathematical Aristotle's attempt to derive the intelligible forms from the actuality of sensation cannot even begin to provide an explanation of our actual knowledge of mathematical, if mathematical really exist potentially in the sensibles and can be actualized only in thought by abstraction. (N.b. that in *Metaphysics* 1051 A 29-33 Aristotle's attempt to explain geometrical knowledge by the actuality of the geometer's knowledge does not even touch the question of the origin of that knowledge. And, unless Aristotle were prepared to say that the mind is actually all the universals, a solution that runs against his whole philosophy, he cannot explain it.)

¹³⁷ Cf. *Metaphysics* 1075 B 34-36 with introductory note to F 30, F 63a with comm. *ad loc.*, F 66a-b with comm. *ad loc.*, *De Part. Animal.* 643 B 17-23 = F 67 with comm.

pus' separately existing numbers occurs in connection with the alleged derivation of numbers from their principles, which Aristotle ascribes to him. The discussion of the principles of number must be postponed for a later section of this chapter. But, about the objections Aristotle raises against the alleged derivation or generation of numbers, it may be said even here that they all depend upon his mistaken interpretation of the nature of the principles and of their relation to each other and to the numbers.¹³⁸ Moreover, Speusippus could hardly have derived, let alone generated, the numbers, since there is evidence in Aristotle and elsewhere that he took them to be eternal, separately existing, and unchangeable entities which are the direct objects of thought and knowledge.¹³⁹ The very fact that Aristotle ascribes generation to Speusippus' numbers is an indication that there is something wrong with his interpretation of the principles. And it is noteworthy that Aristotle tries to *prove* that, notwithstanding their contention to the contrary, the Platonists did in fact generate some of the numbers; or that, in positing contraries as principles, elements, and causes of numbers, they really meant to generate their eternal entities, without even realizing that such numbers would not be imperishable, either.¹⁴⁰ Finally, there is evidence that even in the case of his separately existing magnitudes, the knowledge of which is for him derivative,¹⁴¹ Speusippus asserted that the "generation" of them is only for the sake of knowledge, precisely because there can be no generation of eternally existing entities.¹⁴² If this is true of magnitudes, it must also be true of numbers.

The discussion about the rôle of number in Speusippus' epistemology will be found in the next chapter. Some of his arithmetical doctrines are extant in F 28 and are discussed in the commentary to that text.¹⁴³ It is noteworthy that in several respects they are

¹³⁸ Cf. pp. 32-41 *infra*.

¹³⁹ Cf. note 120 *supra*.

¹⁴⁰ Cf. *Metaphysics* 1075 B 30-34 with introductory note to F 30, *Metaphysics* 1092 A 21-B 8 with introductory note to F 38, *Metaphysics* 1091 A 12-29 = F 41 with introductory note and comm. *ad loc.*, and pp. 40-41 *infra*.

¹⁴¹ Cf. pp. 53-56 *infra*.

¹⁴² Cf. F 72-74 with comm. *ad loc.*

¹⁴³ Cf. esp. comm. on F 28, lines 4-5, 5-7, 5-6, 6, 6-7, 7-8, 15, 17-18, 18-22, 20, 21-22, 22, 22-26, 24, 26-27, 27-31, 32-33, 33-62, 33-36, 36-38.

at variance with those of Plato and Euclid.¹⁴⁴ Of interest to students of Greek mathematics and philosophy is also his terminology.¹⁴⁵

b) *Magnitudes*

Two of Speusippus' arguments in support of the separate existence of magnitudes are extant. One is identical to an argument about numbers, and Aristotle refers to it in connection with such an argument; the other is peculiar to *mathematical* magnitudes. The former argument is that, since the propositions of geometry are not true of the sensibles, geometrical objects must be eternal, separately existing, and unchangeable entities.¹⁴⁶ Aristotle's objections to this argument are the same as those he raised against numbers, and so are the counterarguments to be given from Speusippus' point of view.¹⁴⁷ In the case of magnitudes, however, there is an additional difficulty in Aristotle's own doctrine. For, from Aristotle's point of view, it is intelligible that numbers cannot be materiate universals (λόγοι ἐνυλοὶ). Yet geometrical forms are in a somewhat different situation, since, for example, in a circle of bronze or in a cube of wood the forms "circle" and "cube" are closer to the form "man" than to the form "two" of our earlier example.¹⁴⁸

In order to understand Speusippus' second extant argument in support of his belief in the separate existence of geometrical objects, its implications, and Aristotle's objections to it, it is necessary to keep in mind three things. First, that Speusippus posited the separate existence of the non-material point, i.e. of the unit with position but without dimension.¹⁴⁹ Second, that he is the only thinker to whom Aristotle ascribes this doctrine.¹⁵⁰ Third, that

¹⁴⁴ Cf. comm. on F 28, lines 5-7, 15, 18-22, 24, 36-38.

¹⁴⁵ Cf. esp. on F 28, lines 4-5, 6, 9, 15, 18-22, 20, 20-21, 21-22, 22, 24, 33, 33-36, 34, 38, 41.

¹⁴⁶ Cf. F 36 with comm. *ad loc.*, and F 72 with comm. on F 72-74.

¹⁴⁷ Cf. pp. 24-27 *supra*.

¹⁴⁸ Cf. Aristotle, *Metaphysics* 1036 A 2-8 and the references given in note 83 *supra*.

¹⁴⁹ Cf. F 28, line 34 and n.b. that of point, line, triangle, and pyramid it is said that they are *πρῶτα καὶ ἀρχαὶ τῶν καθ' ἑκάστων ὁμογενῶν*; F 28, lines 35-36 and 61-62; F 50, F 51, F 52, F 62, F 65. On the probability that Speusippus defined the point as a unit with position but no dimension cf. Appendix I.

¹⁵⁰ Cf. F 38, line 1 with comm. *ad loc.* and note 133 there, F 62 with comm. *ad loc.*, and note 202 there.

Speusippus' separately existing magnitudes are not ideal but mathematical magnitudes.¹⁵¹ For him line, plane, and solid are indivisible units but not in the same sense as the ideas of line, plane, and solid are for Plato. Neither of them thought, as Aristotle wrongly believes they did, that solids are aggregates of planes, planes of lines, and lines of points.¹⁵² Plato, even according to Aristotle's own testimony, denied the substantiality of the point.¹⁵³ Moreover, the ideal line, the ideal triangle, etc. are for Plato perfect and indivisible individuals, each of which is not even conceptually derived from anything else.¹⁵⁴ But Speusippus' magnitudes are mathematical. Therefore, while each magnitude exists apart from the sensibles as an eternal and immutable entity, he nevertheless believes that *conceptually* we derive the line from the point, the plane from the line, and the solid from the plane. It is clear, however, that this "derivation" of magnitudes is to be understood in a metaphorical sense, and that it is related to Speusippus' notion that our *knowledge* of geometrical magnitudes, not the magnitudes themselves, is derivative.¹⁵⁵

We are now in a better position to understand the gist of the argument Aristotle ascribes to him in *Metaphysics* 1090 B 5-7 (= F 50): since the point is the extreme and limit of the line, the line of the plane, and the plane of the solid, it is necessary that such entities as point, line, and plane have separate existence. As stated by Aristotle, this is an argument in support of the separate existence of point, line, and plane, and presupposes that of the geometrical solid. For conceptually our knowledge of the solid presupposes that of the plane, the plane that of the line, the line that of the point. Therefore point, line, and plane as separately existing entities must be objects of knowledge. The argument

¹⁵¹ Cf. F 29a, F 31-37, F 50-53, F 72, and the implications of F 28, lines 38-62.

¹⁵² Cf. F 28, lines 60-62, F 51 with comm. *ad loc.*, F 52 with comm. *ad loc.*, F 65 with comm. *ad loc.*, F 72-74 with comm. *ad loc.*, Cherniss, I, pp. 124-140 with n. 83, and pp. 30 and 44-47 *infra*.

¹⁵³ Cf. note 133 to comm. on F 38, line 1.

¹⁵⁴ This follows not merely from the general tenets of the theory of ideas (cf. pp. 70-71 *infra*), but is in fact the explicit testimony of Aristotle when he distinguishes Plato's ideal magnitudes from Xenocrates' mathematical magnitudes: cf. *Metaphysics* 1001 B 19-25, 1036 B 13-17, 1090 B 20-1091 A 12, Cherniss, *Gnomon* 31 (1959), pp. 44-49 = *Selected Papers*, pp. 431-436 and *AJP* 68 (1947), pp. 249-251 with n. 94 = *Selected Papers*, pp. 200-202.

¹⁵⁵ Cf. pp. 53-56 *infra*.

seems to be based upon epistemological considerations but has ontological consequences as well.

Against this argument Aristotle raises two objections, both based upon his own doctrine that mathematical solids exist potentially in the sensibles and are separable only in thought. He first contends that the extremes are not substances but rather limits, the implication being that the limits of solids have only potential existence in the sensibles, and so that they need not exist apart from them. This argument depends, then, upon his own doctrine of mathematical limits and is somewhat incongruous with Aristotle's own association of limits with form and substance.¹⁵⁶ His second argument is that, even if point, line, and plane are substances, they are substances of sensible entities, and so there is no reason to think that they have separate existence. But surely Speusippus' argument presupposes the separate existence of mathematical solids, even if he had adapted to his own use an originally Pythagorean argument.¹⁵⁷ Thus once again the issue between his doctrine and that of Speusippus depends upon Aristotle's own doctrine of mathematical limits.

The most serious difficulty of Speusippus' argument in 1090 B 5-7 (= F 50) is not mentioned by Aristotle there, though he does raise it elsewhere.¹⁵⁸ It has to do with the substantiality of the point: It is indeed paradoxical to postulate the separate existence of the point as a unit with position but without dimension. Moreover, the point's having position presupposes geometrical space; yet Speusippus seems to have related space to three dimensions.¹⁵⁹ This in turn points to a related difficulty in Speusippus' conception, namely that his magnitudes are mathematical and as such conceptually derivative and divisible. For, in part at least, it is this divisibility that causes him to posit the substantiality of the point.

In *Metaphysics* 1092 A 17-21 (= F 53) Aristotle raises two objections against Speusippus' mathematical solids. He first contends that it is absurd to make place simultaneous with mathe-

¹⁵⁶ Cf. *Physics* 209 B 3-5, *De Caelo* 293 B 12-15, *De Gen. et Corr.* 335 A 14-21, Cherniss, I, n. 70.

¹⁵⁷ Cf. comm. on F 50.

¹⁵⁸ Cf. Aristotle's flat statement in F 62 that points without magnitude have no substantial existence, F 51 with comm. *ad loc.*, the reference to Cherniss in note 152 *supra*, and Heath, *Euclid's Elements*, I, p. 156.

¹⁵⁹ Cf. F 53 with comm. *ad loc.* On the point cf. Appendix I.

mathematical solids. For place is peculiar to individual things, which are therefore separate in place; but the mathematical are nowhere. The second argument is: it is absurd to say that mathematical solids are somewhere, but not to say what is their place. It ought to be obvious, however, that Speusippus' mathematical solids, since they are separately existing entities, are non-spatial. All he may have done is to associate space or place with three dimensions, and the laws of three-dimensional space with the properties of mathematical solids. There is no reason to believe that he thought that mathematical solids are in space as the sensibles are. In connection with this criticism of Speusippus, it is noteworthy that, notwithstanding Plato's explicit statement to the contrary, Aristotle contends that the ideas must be in place.¹⁶⁰

Aristotle's other arguments against Speusippus' separately existing mathematical magnitudes depend upon the alleged derivation of magnitudes from the principles and will therefore be discussed in the next section of this chapter. As in the case of numbers, however, it is well to stress at once that Speusippus neither derived (except conceptually) nor generated his magnitudes at all, which are for him separately existing, eternal, and immutable entities. Moreover, it is possible to discover the reasons that led Aristotle to his peculiar misinterpretation of Speusippus' thought.¹⁶¹ The epistemological aspects of Speusippus' geometrical doctrines are discussed in the next chapter. These doctrines themselves and the related terminology are dealt with in the commentary to several different fragments, as are also the similarities to, and differences from, Plato and Euclid.¹⁶²

c) *The Principles*

Having dealt with numbers and magnitudes, we must next consider Speusippus' principles, for our information is limited to those he posited for his two kinds of separately existing mathematical entities. The evidence consists for the most part in Aristotle's testimony, though some important inferences can also be drawn from Speusippus' own words in F 28. The Neoplatonic texts about Speusippus' One are useless for the reconstruction of his doctrine

¹⁶⁰ Cf. *Physics* 209 B 33-210 A 2 and contrast Plato, *Timaeus* 52 A-C.

¹⁶¹ Cf. pp. 32-47 *infra*.

¹⁶² Cf. esp. the several notes on F 28, lines 33-36 and 38-62 and the comm. on F 50, F 51, F 52, F 53, F 62, F 65, F 72-74.

because they are contaminated by Neopythagorean and/or Neoplatonic notions which it would be anachronistic to ascribe to him, and which in any case are incompatible with some essential tenets of his thought about which we have reliable evidence.¹⁶³ Aristotle's own testimony is not always consistent; but from it we can derive valuable information, provided that we take into consideration *all* his references to Speusippus' principles, his motivation in each passage, and other evidence we have about our philosopher's system.

According to Aristotle Speusippus posited the One (τὸ ἓν or ἡ μονάς) and multiplicity (τὸ πλῆθος or πολλά) as the principles (ἀρχαί) of mathematical numbers,¹⁶⁴ and the point (ἡ στιγμή), which is similar to the One, and a second principle, similar to multiplicity but not identical with it, as the principles of mathematical magnitudes.¹⁶⁵ We do not know the name Speusippus gave to the last mentioned principle. Aristotle takes the principles within each pair of principles to be contraries and elements. He also discusses the One and the point as if Speusippus had meant them to be formal causes in Aristotle's sense, and multiplicity and the second principle of magnitudes as if they were material causes.¹⁶⁶ We shall first discuss the two pairs as principles *tout court*, however, for in the course of our analysis of the evidence and of its implications it will become apparent that for Speusippus the principles cannot be contraries, nor elements, nor formal and material causes. On the other hand, since his own words in F 28 show that Speusippus conceived the point as a principle,¹⁶⁷ we may infer that the same was the case with the One, and perhaps also with multiplicity and the second principle of magnitudes.

We must begin with the evidence about the One. And it is well to state at once that Aristotle does not say either that Speusippus' One is beyond being or that it is non-existent and purely negative. These two interpretations have been based upon what is in fact mere misunderstanding of the syntax and, hence, of the argument of *Metaphysics* 1092 A 14-15 (= F 43), and fall with them.¹⁶⁸

¹⁶³ Cf. comm. on F 48 and F 49a-b, and chapter V *infra*.

¹⁶⁴ Cf. F 34, F 38, F 39, F 40, F 45a, F 46a, F 51, F 65.

¹⁶⁵ Cf. F 51 and F 65.

¹⁶⁶ In addition to the passages cited in notes 164-165 *supra*, cf. *Metaphysics* 1087 A 29-B 4, which refers to all of Aristotle's predecessors.

¹⁶⁷ Cf. F 28, lines 33-36, 38-40, and 61-62.

¹⁶⁸ Cf. comm. on F 43.

On the contrary, Aristotle's argument there, being a *reductio ad absurdum*, implies that Speusippus probably would not have been prepared to accept the necessary consequence of his doctrine as Aristotle sees it. For the latter contends that, if the principles were indefinite and imperfect, the One itself would not even be an entity. But in every other passage about Speusippus' One Aristotle consistently takes it to be just that. Of these passages only two need be discussed here.

The first is *Metaphysics* 1028 B 21-24 (= F 29a). Aristotle says there that, *beginning with the One*, Speusippus posited more substances than Plato's three and different principles for each kind of substance, one for numbers, another for magnitudes, etc. Some scholars have taken the italicized words to mean that the One is itself a kind of substance different from the numbers. This interpretation is impossible, however, because it is inconsistent with the rest of Aristotle's testimony and also with the implications of 1028 B 21-24 itself. For Aristotle himself says that Speusippus' separately existing, eternal, and immutable numbers are *the first entities*.¹⁶⁹ This much, as we have seen, we can also gather from F 28.¹⁷⁰ And so the One, if it is an entity, must be a number, i.e. the number one.¹⁷¹ Therefore, it could hardly be a different kind of substance from the numbers. We can reach a similar conclusion even from careful consideration of the context and of the wording of 1028 B 21-24. Aristotle mentions the Speusippean substances in their respective ontological order, as he also does with those of Plato in 1028 B 19-21 and of Xenocrates in 1028 B 24-27. He says that Speusippus posited different principles for each kind of substance, namely for numbers, magnitudes, and then for the soul, and he implies that it is by assigning different principles to each kind of substance that Speusippus is able to multiply the substances.¹⁷² But no principle is there assigned to the One and none can be assigned to it. Consequently, Aristotle could not have meant to say that the One is a different kind of substance from the numbers. Elsewhere, however, Aristotle does say that the One is the principle of number,¹⁷³ and so the italicized words probably mean

¹⁶⁹ Cf. the references given in note 100 *supra*.

¹⁷⁰ Cf. pp. 20-21 *supra*.

¹⁷¹ On one as the first odd number in Speusippus cf. F 28, lines 18-22 with comm. *ad loc*.

¹⁷² Cf. comm. on F 29a.

¹⁷³ Cf. *Metaphysics* 1083 A 23-24 = F 34 with comm. *ad loc.*, 1091 B 23-25 = F 45a, F 65. Cf. also F 38-40 and F 46a on the One as a contrary.

this: that the One is an entity or substance and that it is the first entity. Now we know that Speusippus *did consider* one to be the first odd *number*, whereas Aristotle thinks that two is the first number and explicitly denies that one is a number.¹⁷⁴ If we take into account the different views of Speusippus and Aristotle *vis-à-vis* the first number, the latter's statement in 1028 B 22 becomes intelligible. For in their context the words "beginning with the One" imply that Speusippus' One is a substance and the first substance. Hence, this statement is true of the number one, which for Speusippus is the first number—numbers as such being the first entities—and the principle of number.

Concerning the One, then, the differences between Speusippus and Aristotle amount to this: For the latter the One is not a number, nor a separately existing entity, but the principle of number because, each number being a plurality of abstract monads, the One is its measure. The One is nothing but "unity", which is one of the two most universal predicates (the other is "being"). For according to Aristotle unity is nothing but a determinate unit.¹⁷⁵ For Speusippus, on the other hand, the One is identical with the number one, which is the first number and, precisely because of this, the principle, i.e. the beginning, of number.¹⁷⁶ Since it is a number, one has separate existence as all the other numbers have. Had Speusippus' One been different from the number one, we would have to infer that it is merely conceptual unity and that it does not have separate existence, since, even according to Aristotle, for Speusippus numbers are the first entities and the One is the principle of number. Our evidence, however, points to the fact that Speusippus did not hypostatize the universals, but postulated the separate existence of numbers and magnitudes which he conceived

¹⁷⁴ On two as the first number according to Aristotle cf. p. 20 with note 95 *supra*. On his argument that one is not a number cf. *Metaphysics* 1087 B 33-1088 A 14. Cf. also the following note.

¹⁷⁵ Cf. *Metaphysics* 1016 B 17-31, esp. lines 18-21, 1021 A 12-14, 1052 B 15-1053 A 30, esp. 1052 B 15-24 and 1053 A 27-30, 1054 A 4-13, 1087 B 33-1088 A 14, esp. 1087 B 33-34 and 1088 A 4-8.

¹⁷⁶ When Aristotle says that the One is not the principle of mathematical number he means the One as the Platonists conceive it, i.e. as having separate existence. For him numbers are *not* separately existing entities, nor is one a number; it is merely the unit that is the measure of number, cf. notes 174-175 *supra*.

as separately existing *individual* entities.¹⁷⁷ The following additional considerations support the inference that Speusippus did not distinguish between the One and the number one. To begin with, the assumption that he did not make this distinction renders Aristotle's testimony intelligible and illuminating, whereas that testimony would be completely off the mark had Speusippus posited the separate existence of the One as a different entity from the number one. It is significant that Aristotle himself sometimes substitutes monad (μονάς) for Speusippus' One,¹⁷⁸ whereas he does not make this substitution in the case of the other Platonists' One, except when he criticizes them. This means that Aristotle himself took Speusippus' One to be a numerical monad; and a monad which, according to him, Speusippus' wrongly considered to be essentially different from the other numerical monads.¹⁷⁹ It is also significant that, immediately after criticizing Speusippus' material principle of numbers in F 39, Aristotle (*Metaphysics* 1087 B 33-1088 A 14), tries to prove that one is not a number. This seems to indicate his awareness of the fact that for Speusippus one is a number. Speusippus, however, considered one to be a number and number to be denominative number; and so it is clear that for him the first monad is both the number one and the principle, i.e. the beginning, of number. It is therefore likely that Speusippus himself used "the One," "one," and "monad," indistinctly, to designate "one" both as a number and as the principle of number.¹⁸⁰ Secondly, Speusippus postulated that the separately existing point is like the One or monad and that any entity is a kind of monad or point.¹⁸¹ His attempt to relate the unity of any entity ultimately to its similarity to the One or monad is an indication

¹⁷⁷ This means that Speusippus did not hypostatize the universals of number, as Aristotle from his point of view thinks he should have done. This follows not merely from the general tenets of his doctrine as reported by Aristotle himself but may be seen also from F 28, lines 10-14 (about the decad). And, since for Speusippus one is a number, the difficulty Aristotle raises against the Platonists in *Metaphysics* 1085 A 23-31—the relation of the One to the numbers when the universals are hypostatized—is particularly inappropriate in his case. On this passage of the *Metaphysics* cf. also pp. 71-72 *infra*.

¹⁷⁸ Cf. introductory note to F 38 and F 65 with comm. *ad loc.*

¹⁷⁹ Cf. F 34 and F 40 with comm. *ad locc.* and pp. 23-24 *supra*.

¹⁸⁰ In addition to Aristotle's testimony cf. F 28, line 34 where τὸ ἓν designates the number one.

¹⁸¹ Cf. F 51, F 65, and F 66a.

that he did not hypostatize "unity" but that, conceiving the One or monad to be a separately existing entity, he explained the unity of any other entity by its similarity to the unit or one or monad.¹⁸² Finally, his own words in F 28 show that for Speusippus the point is both the first magnitude and the principle of magnitude.¹⁸³ And Aristotle himself discusses Speusippus' point as if it fulfilled these two functions, i.e. both as a substantial magnitude and as the principle of magnitude.¹⁸⁴ Consistency alone would require that also the number one be both the first number and the principle of number. We know, moreover, that for Speusippus one is the first number; and, since the point is similar to the One or monad and is both the principle of magnitude and the first magnitude, the likely inference is that in his system the first number and the principle of number are also one and the same thing.

The second text that must be discussed here is *Metaphysics* 1083 A 23-27 (= F 34).¹⁸⁵ Aristotle states there that for Speusippus numbers, i.e. mathematical numbers, are the first entities and that the One itself is their principle. He contends that it is absurd to say, as Speusippus does, that there is a One which is the first unit of units, and not a first Two of two's, nor a first Three of three's, etc., since the same reasoning applies to all. This objection, however, presupposes Aristotle's belief that one is not a number. Only on that assumption does it make sense for him to contend that the hypostatization of the One as the principle of number, i.e. as the principle of the other numerical units, would require also the hypostatization of a first Two of two's, a first Three of three's, etc. For the context shows that the hypostatization of the numbers after one is for Aristotle tantamount to believing in incomparable numbers; and we know that the One which is the principle of incomparable numbers is not for Aristotle, nor for Plato and Xeno-

¹⁸² Speusippus thought that any entity is like a point (cf. on F 66a-b). But, in as much as the point is similar to the One, that any entity is a unit is ultimately due to the One or the number one. Cf. also pp. 57-60 *infra*.

¹⁸³ Cf. F 28, lines 33-36, 38-40 and 61-62. It is clear that Speusippus treats all four, point, line, plane, and solid, as magnitudes. Hence the somewhat paradoxical notion that the point as an entity is a magnitude without dimension (cf. Appendix I).

¹⁸⁴ Cf. F 50, F 51, F 52, F 62, and F 65.

¹⁸⁵ On what follows in the text cf. F 34 with comm. *ad loc.* and pp. 23-24 *supra*.

crates, either, a number.¹⁸⁶ Hence Aristotle's notion that the One cannot be the principle of *mathematical* number.¹⁸⁷ Speusippus, however, believing that his separately existing numbers are congeries of abstract monads, that one is the first number and, as such, the principle of mathematical number, could not have meant to say that one as a principle is the formal cause or element of the other numerical units. Aristotle's contention in 1083 A 29-30 (= F 34) that, if the One is the principle of mathematical number, it must be essentially different from the other monads, is a valid objection. But this difficulty has to do, as we have seen, with Speusippus' conception of separately existing mathematical numbers, not, as Aristotle thinks, with his having posited the One as the principle of mathematical number. For he probably did so because one is the first number, whereas Aristotle's objection presupposes his own mistaken notion that one is not a number. When this tendency of Aristotle's testimony is taken into account, his statements here that according to Speusippus the One itself is the principle of mathematical number and that it is a first unit of units become valuable evidence about Speusippus' doctrine. These statements do not at all imply, as some scholars think they do, that in Aristotle's view Speusippus distinguished the One as the first principle from the One as the principle of number. And here and elsewhere (cf. F 45a) Aristotle makes it clear that Speusippus posited the One as the principle of mathematical number only.

We must now discuss Aristotle's testimony about Speusippus' second principle of number, namely multiplicity. For Aristotle and for the ancients generally multiplicity is the very essence of number;¹⁸⁸ hence their notion that one is not a number. It is note-

¹⁸⁶ For the evidence that Aristotle does not consider one to be a number cf. notes 174-176 *supra* with the corresponding remarks in the text. Plato's One is the hypostatization of the concept unity, and he considered two to be the first number (cf. note 66 *supra*). In the case of Xenocrates we have only indirect evidence: his principles of numbers (= idea-numbers) are the One and the Indefinite Dyad; and so he could hardly have considered one a number, since it is the function of the Indefinite Dyad to divide. Cf. also p. 15 with note 74 *supra*; the Aristotelian passages mentioned there are also relevant to Xenocrates' theory of number.

¹⁸⁷ Aristotle means that the *separately existing* One is not the principle of mathematical number; for he himself believed that the One as a measure is the principle of number, cf. notes 175-176 *supra* with the corresponding remarks in the text.

¹⁸⁸ Cf. comm. on F 39.

worthy that the Stoic philosopher Chrysippus, trying to consider one as a number, is said to have defined it as multiplicity one ($\pi\lambda\tilde{\eta}\theta\omicron\varsigma$ ἓν),¹⁸⁹ a self-contradictory notion, as Iamblichus points out, since one is not a multiplicity. Now Aristotle, since he himself believes that number, that is any natural number beginning with two, is a measured or definite multiplicity, treats Speusippus' second principle of number in a more favorable way than those of the other Platonists. He criticizes it nonetheless because he thinks that Speusippus posited multiplicity as the material element of number and as contrary to the One.¹⁹⁰ Though in this case we have no evidence other than Aristotle's testimony, the inferences we can reasonably draw from it show that Aristotle's criticisms of Speusippus' principles of number are based upon the necessary implications of that doctrine as he interprets it. To begin with, it is pretty certain that Speusippus considered one to be the first number and the principle of number. Moreover, if he spoke of multiplicity as the "second" principle of number, he certainly could not have hypostatized it, nor could he have conceived it to be a separate entity in any sense.¹⁹¹ An indication that Aristotle himself did not have any evidence as to the ontological status of multiplicity in Speusippus' system is his argument in *Metaphysics* 1085 B 12-27 (= F 40). For he there faces his adversary with the dilemma that, whether his second principle of number is an indefinite or a definite multiplicity, the component units of number cannot come from it. The whole argument depends upon Aristotle's assumption that multiplicity is a generative principle and an element of number. For Speusippus, however, multiplicity could hardly have been an element or a generative principle, since he thought that mathematical numbers are the first entities and that each number has separate existence and is eternal and immutable. Neither is it likely that he considered multiplicity the contrary of the One, since he thought that one is the first number and that every other number is a definite multiplicity, and since in any case multiplicity is not the contrary of one,

¹⁸⁹ Cf. Iamblichus, *In Nicom. Arith. Introd.*, p. 11, 7-9 and Syrianus, *In Metaphysica*, p. 140, 9-10.

¹⁹⁰ Cf. F 39 with comm. *ad loc.*

¹⁹¹ For Speusippus numbers are the first entities and multiplicity as such cannot for him be a number. He must have thought that any number greater than one is a definite multiplicity, as Aristotle himself does (cf. on F 39).

nor even of the One. In this connection, it is noteworthy that Aristotle sometimes refers to Speusippus' multiplicity as "many" (πολλά),¹⁹² that he takes it to be a plurality, and that he then argues that multiplicity cannot be the contrary of the One because this would mean that the One is "few."¹⁹³

Aristotle himself thinks that the One is the principle and measure of number and that each number is a determinate multiplicity or plurality. And we may infer that, apart from the fact that he considers one to be a number and, as such, to be the principle of number, Speusippus' conception is very close to Aristotle's own. The number one is the principle of number because it is the first number and because every other number is a multiplicity of units. Hence, every number greater than one is a definite or determinate multiplicity, as it is for Aristotle himself. And so Speusippus may have seen in multiplicity the second principle of number, without saying or implying that it is an element of number, nor the material cause of number, nor the contrary of the One. For him, as for Aristotle himself, multiplicity would always be a determinate number, which for him—but not for Aristotle—, has separate existence. Aristotle, however, because he believes that *all* his predecessors posited contraries as principles, that the contraries are therefore the elements and the material and formal causes of everything else,¹⁹⁴ criticizes Speusippus' principles as if they had been meant to be what he in his interpretation thinks they are. Moreover, because he believes that the principles of all his predecessors are contraries, he takes Speusippus' principles and those of the other Platonists as well to be *generative* principles.¹⁹⁵ He then infers that the necessary implication of this doctrine is that the Platonists in fact generate the very entities which they themselves take to be eternal.¹⁹⁶ None of these criticisms is cogent, however, since Speusippus' principles are not contraries, nor elements, nor generative principles. Aristotle himself provides evidence that he is merely criticizing the Platonists on the basis of his own interpretation of the necessary

¹⁹² Cf. introductory note to F 38 with note 127 there and F 46a, line 2 with comm. *ad loc.*

¹⁹³ Cf. F 39 with comm. *ad loc.*

¹⁹⁴ Cf. note 166 *supra* with references.

¹⁹⁵ Cf. F 38 with introductory note and comm. *ad loc.* and F 40 with comm. *ad loc.*

¹⁹⁶ Cf. *Metaphysics* 1075 B 30-34 with introductory note to F 30, F 38 with introductory note and comm. *ad loc.*, F 41 with comm. *ad loc.*

implications of their doctrines about the principles; for he tries to *prove* that the Platonists generated the numbers.¹⁹⁷ Moreover, in the case of Speusippus Aristotle involves himself in obvious inconsistency when he tacitly includes him among those who allegedly generated *all* things from the One and a contrary principle.¹⁹⁸ Thus, he himself states that for Speusippus the One is the principle of mathematical number only and on that ground distinguishes his doctrine from that of the other Platonists.¹⁹⁹

According to Aristotle there is an additional important difference between Speusippus' principles and the other Platonists' principles: Speusippus did not identify the One and multiplicity with good and evil, respectively, and he even thought it illegitimate to predicate goodness of the One.²⁰⁰ Aristotle refers to two of the arguments Speusippus advanced in support of this doctrine. He gave a biological analogy which he seems to have used as an *a fortiori* argument: Even in the case of living beings goodness and beauty are found in the products, not in the seed or sperm, i.e. in their "principles." Goodness and beauty appear after a natural process of development and cannot, therefore, be found in numbers and magnitudes, since they are separately existing, eternal, and immutable entities.²⁰¹ Against this argument Aristotle raises two objections. The first is based upon his doctrine of the priority of actuality to potentiality: He contends that not the seed or sperm is first but the actual living being.²⁰² This argument, however, would at best be a refutation of Speusippus' analogy, not of his doctrine. For it ought to be clear that there is a fundamental reason why Speusippus had to deny the presence of good and evil among his *mathematical* numbers and magnitudes and among their respective principles: Numbers and magnitudes are separately existing objects of thought and knowledge; and, since Speusippus

¹⁹⁷ Cf. the references given in the previous note and n.b. *Metaphysics* 1091 A 21-1092 B 8, where in 1092 A 35-B 3 (= F 38) the words ὥς ἐξ ἐναντιῶν εἴη ἂν ὁ ἀριθμὸς are obviously Aristotle's own inference. Isnardi Parente, *Proodos*, p. 92, n. 14 has failed to see this last point.

¹⁹⁸ Cf. e.g. 1080 B 4-8 and 1087 A 29-B 4. The latter passage comes immediately before F 39, while Speusippus is tacitly included in the former passage as well, in as much as his doctrine is referred to in 1080 B 14-16 = F 33.

¹⁹⁹ Cf. F 34 and especially *Metaphysics* 1091 B 22-25 = F 45a.

²⁰⁰ Cf. F 42a, F 43, F 44, F 45a, F 46a, F 47a with comm. *ad locc.*

²⁰¹ Cf., with the respective comments, F 42a, F 43, F 44.

²⁰² Cf. F 42a and F 43 with *Metaphysics* 1049 B 24-27.

did not hypostatize universal concepts, he could hardly have ascribed to them goodness and beauty in any sense whatever. Moreover, though Speusippus' conception of separately existing mathematical numbers and magnitudes is difficult, Aristotle's own doctrine of the priority of actuality to potentiality presents serious difficulties as well.²⁰³ His second objection to Speusippus' argument from analogy is the *reductio* he attempts in *Metaphysics* 1092 A 11-15 (= F 43): if the first principles were not good and, hence, had no perfection, the One itself would not even be an entity.²⁰⁴ It seems, however, that Aristotle is here pressing too hard the biological analogy. It is intelligible why in the case of living beings Speusippus said that the more perfect entities, i.e. the products, always come from the indefinite and imperfect "principles," i.e. the seed or sperm. But he could have hardly meant to say the same thing about numbers and magnitudes. To begin with, numbers and magnitudes are eternal. Secondly, the One and the point are both principles and, respectively, the first number and the first magnitude. Speusippus thought that goodness and beauty, and the "perfection" derived from them, require a process of natural development, whereas in numbers and magnitudes there can be no development at all. But neither the One nor the point is indefinite and imperfect, for they are determinate entities. There is reason to believe, therefore, that Aristotle's "report" in F 43 is somehow contaminated by his own interpretation of the necessary implications of Speusippus' doctrine of the principles. And Aristotle is bound to press his objections against the principles because he himself believes that there is no goodness, though there is beauty, in mathematics.²⁰⁵

²⁰³ Cf. Cherniss, I, pp. 470-474.

²⁰⁴ For what follows in the text cf. comm. on F 43 and pp. 33 ff. *supra*.

²⁰⁵ Cf. *Metaphysics* 1078 A 31-B 6 with Cherniss, I, p. 383 and n. 302. The Aristotelian distinction between two aspects of the final cause, goodness and beauty, cannot be ascribed to Speusippus, as Merlan, *From Platonism*², p. 107, Krämer, *Ursprung*, pp. 212-214, and others do when they ascribe beauty to Speusippus' mathematics, since that ascription contradicts the testimony of Aristotle. For according to him Speusippus denied both beauty and goodness to the One, because beauty and goodness are the result of a process of natural development; this implies that there is no beauty in mathematics just as there is no goodness, either (cf. F 42a, F 43, and F 44 with comm. *ad locc.*). In fact, Merlan and others ascribed this aspect of Aristotle's doctrine to Speusippus only because they thought that Iamblichus, *De Comm. Math. Sc.* IV, pp. 15, 6-18, 12 is a fragment of Speusippus. Cf. *contra* Ch. V *infra*.

It is even more difficult to distinguish the Speusippean doctrine from Aristotle's inferences in the case of Speusippus' second argument to deny goodness to the One. Aristotle states that it was by positing the One as the principle of *mathematical* number—not of ideal numbers, nor of idea-numbers—that Speusippus tried to avoid the difficulties attending the other Platonists' identification of the principles with good and evil. For, he maintains, generation being from contraries, the identification of the One with the good would be tantamount to identifying multiplicity with evil.²⁰⁶ Since he himself believes that there is no evil among the highest and eternal principles,²⁰⁷ Aristotle praises Speusippus for his refusal to identify the principle contrary to the One with evil. He also approves of Speusippus' notion that the One and the good should not be identified. Nevertheless he rejects Speusippus' doctrine with the following arguments: (a) Speusippus was wrong in giving up the good as a principle and not the One, for goodness belongs *per se* to the supreme principle (i.e. the unmoved mover). The difficulty of the other Platonistic doctrines consists rather in positing the One as the highest principle and in making it a principle as an element and an element of number.²⁰⁸ (b) There is no contrary of matter.²⁰⁹ Speusippus' multiplicity, then, which Aristotle takes to be the material element of number, is not the contrary of the One. Hence, ascribing goodness to the One (i.e. to what Aristotle takes to be Speusippus' highest principle), would not necessarily imply the identification of multiplicity with evil. Aristotle's first objection, even apart from his misunderstanding of Speusippus' One as the principle of number, presupposes his own doctrine of the unmoved mover as the final cause of the whole universe.²¹⁰ However, his second objection and his account of the considerations that led Speusippus to deny the identification of the One and the good, in so far as they imply his interpretation of the Speusippean principles as contraries, elements, and generative principles, fall with it. Moreover, the probability is that Plato's alleged identification of the One with the good is merely the result of Aristotle's

²⁰⁶ Cf. F 44, F 45a, F 46a.

²⁰⁷ Cf. *Metaphysics* 1051 A 15-21.

²⁰⁸ Cf. F 44 and F 45a with comm. *ad loc.*

²⁰⁹ Cf. F 46a with comm. *ad loc.*

²¹⁰ Cf. F 30 with introductory note and comm. *ad loc.* and F 42a with introductory note and comm. *ad loc.*

interpretation.²¹¹ Xenocrates, however, since he identified all ideas with numbers, may have identified the One with the good;²¹² and, though he need not have identified the Indefinite Dyad with evil, there is some evidence that he explained evil as the negation of unity, and this may have led Aristotle to contend that Xenocrates identified evil with the material principle.²¹³ And so it is possible that Speusippus argued against the identification of the One and the good and/or against predicating goodness of the One; he may also have said that either of these doctrines would imply ascribing evil to the second principle. Yet Aristotle's argument from the fact that generation is from contraries is his own and need not be ascribed to Speusippus at all. However that may be, we can be reasonably certain that in the Speusippean universe goodness and beauty appear only at the level of soul and of the sensibles. For we have evidence that Speusippus related these two concepts to living beings, that he believed in the immortality of the human soul, and that he probably spoke of good and wise men as divine.²¹⁴

An important consequence of Speusippus' doctrine is that he did not hypostatize the good, as Plato did. For this he receives qualified praise in *Eth. Nic.* 1096 B 5-7 (= F 47a), where Aristotle implies that Speusippus is close to his own doctrine that the good is not a univocal concept. Given the importance of the principle of similarity in Speusippus' metaphysics and theory of knowledge, it is tempting to think that, like Aristotle himself, he conceived goodness to be a not purely homonymous term.²¹⁵

According to Aristotle Speusippus posited the point, as similar to the One or monad in number, and a second principle, similar to multiplicity but not identical with it, as the principles of magnitude. It is clear from the Aristotelian evidence itself that the separately existing point is both the first minimal magnitude and, as such, the principle, i.e. the beginning, of magnitude. The same thing may be seen in F 28, where Speusippus himself treats the point as a substance, as the first magnitude, and as the principle of magnitude.²¹⁶

²¹¹ Cf. comm. on F 48 with note 161 there.

²¹² Cf. Xenocrates, frags. 15 and 18 (Heinze) with Cherniss, *Plutarch's Moralia* XIII, i, p. 92, n. a.

²¹³ Cf. Xenocrates, frags. 28, 62, 64, and 68 (Heinze) with Cherniss, I, n. 176 and pp. 480-481 and 484-485.

²¹⁴ Cf. F 42a, F 44, F 55, and F 57.

²¹⁵ Cf. p. 78 *infra*.

²¹⁶ Cf. notes 183-184 *supra* with the corresponding remarks in the text.

F 28 provides valuable evidence both for Speusippus' principles of magnitudes and for his use of principle ($\alpha\rho\chi\eta$) in the sense of first and minimal entity of its kind. He states there that the point, the line, the triangle, and the pyramid are the first entities and principles of their kind, and also that they are the first entities among planes and solids.²¹⁷ This means that the point is the first minimal magnitude (though it is a "magnitude" without dimension), the line the second, the triangle, which is the first plane, the third, and the pyramid, which is the first solid, the fourth. The final sentence of the fragment is also important, for Speusippus says there that the first principle of magnitude is the point, the second the line, the third the plane, and the fourth the solid.²¹⁸ Two inferences can be drawn: First, that to be a principle of something means to be the first minimal entity of its kind. Second, that there are several "formal" principles of magnitude because there are four kinds of magnitudes: the point, which has no dimension, the line, which has one dimension; the triangle, which like any plane has two dimensions but which is the minimal and first plane because any other plane can be divided into triangles while the triangle cannot be divided into anything but triangles; and the pyramid, which like every other solid has three dimensions and is the first and minimal solid. The point is the first principle of magnitude because in Speusippus' opinion it is the first minimal magnitude, which the other magnitudes presuppose. It is merely similar to the monad, for it is a monad with position and no dimension.²¹⁹

Concerning what Aristotle calls the material principle of magnitudes, which is similar to multiplicity, we have no other evidence but his own. If Speusippus spoke of a principle parallel to the point in a similar sense in which he may have spoken of multiplicity as parallel to one, and if a guess may be made about its name, I should suggest something like "dimension" or $\delta\iota\acute{\alpha}\sigma\tau\eta\mu\alpha$, the very word Aristotle uses in *Metaphysics* 1085 B 30-32 (= F 51) when criticizing Speusippus. For, just as every number after one is a multiplicity, so every magnitude after the point has one, two, or three dimensions. However that may be, Speusippus could hardly

²¹⁷ Cf. F 28, lines 33-36 and 38-40.

²¹⁸ Cf. F 28, lines 61-62.

²¹⁹ Cf. pp. 29-30 *supra* and 457-458 *infra*.

have posited the point and the principle parallel to it as generative principles, nor as contraries and elements, nor as formal and material causes in Aristotle's sense. And so the latter's criticism of the alleged generation or derivation of magnitudes from the principles ²²⁰ must be rejected as not cogent.

Nevertheless, a few of these criticisms deserve some consideration. Thus, Aristotle is right in contending that the point cannot have separate existence.²²¹ He is wrong, however, in thinking that for Speusippus and/or the Platonists magnitudes are aggregates of points, or that lines are aggregates of points, planes of lines, and solids of planes.²²² It is equally inappropriate to face Speusippus with the dilemma of *Metaphysics* 1085 A 35 - B 4 (= F 51): (a) if the matter is one, line, plane, and solid will be the same, for from the same principles one and the same thing will result. But, apart from the fact that Speusippus' separately and eternal magnitudes are neither generated nor derived from the principles, his own words in F 28, lines 61-62 show that point, line, plane, and solid are all principles of magnitude. Thus, even if Speusippus had posited a single matter for magnitudes, Aristotle's argument ignores the existence of four different "formal" principles. (b) If there is a plurality of material principles, either (i) they are implied in one another or (ii) not. In the former case the plane will be identical with the line (this is refuted in the same way as possibility [a]); in the latter case, the plane and the line will be substances totally independent of each other. This last possibility is meant to recall the episodic nature of the Speusippean universe with a vengeance, since it would mean that even the several kinds of magnitudes are episodic in respect to one another.²²³ Against it one may say that even according to Aristotle himself Speusippus posited one material principle for all magnitudes and, moreover, that even Speusippus'

²²⁰ Cf. esp. F 51 with comm. *ad loc.*

²²¹ Cf. note 158 *supra*. It is in any case Aristotle's standard doctrine that mathematical points, lines, planes, and solids do not have separate existence.

²²² Cf. note 152 *supra* with the corresponding remarks in the text.

²²³ *Metaphysics* 1085 B 1-4 = F 51 (cf. also 1085 A 16-20 with introductory note to F 40) explains what Aristotle means by the episodic character of the different substances but does not use the word "episodic." (This has been misunderstood by Annas, *Aristotle's Metaphysics M and N*, p. 185.) On the other hand, in F 30 and in F 37 he uses the word "episodic" and speaks of the lack of connection between the substances but without explicitly saying that the episodic character of the Speusippean universe is due to the plurality of material principles (cf. comm. on F 37). Cf. Further this chapter, section e.

metaphorical derivation of magnitudes “for the sake of knowledge” by means of “fluxion” shows Aristotle’s objection to be off the mark.²²⁴

We may now add that the Speusippean magnitudes cannot be derived from numbers, as Aristotle and some modern scholars would have it, and that numbers are not formal causes of magnitudes or of anything else. Discussion of Aristotle’s objection to the similarity of point to monad must be postponed to the next chapter, since it is appropriate to discuss it in connection with Speusippus’ epistemological doctrines.

d) *The Soul*

Speusippus’ third substance is the soul, which has its own peculiar principles. Unfortunately, we have no information concerning this question, though we may infer that the principles of soul must be similar to those of magnitude.²²⁵ Precisely because of this relation of similarity, the soul for Speusippus can be neither a number nor a magnitude.²²⁶ He thought that the soul is immortal.²²⁷ If we take into account the fact that he interpreted metaphorically the creation myth in Plato’s *Timaeus* and that therefore in all probability he himself believed in the perpetuity of the universe,²²⁸ the likelihood is that he also believed that the soul has no origin in time.²²⁹

The soul for Speusippus is the organ or seat of knowledge.²³⁰ Since he spoke of the mind (νοῦς) as having its own peculiar nature,

²²⁴ Cf. pp. 53-56 *infra*.

²²⁵ Cf. F 29a with F 51.

²²⁶ This is the necessary implication of Speusippus’ doctrine that numbers, magnitudes, and the soul are different kinds of substances, each of which has its own peculiar principles. Cf. comm. on F 54a-b.

²²⁷ Cf. F 55 with comm. *ad loc.*

²²⁸ Cf. F 61a-b with comm. *ad loc.*, and F 28, lines 13-14 with comm. *ad loc.* Since the latter passage shows that Speusippus had the *Timaeus* in mind even when he was putting forward his own doctrine (n.b. the decad as *παράδειγμα* of the “creating god”), we may infer that he himself believed the universe to have no origin and no end in time.

²²⁹ This follows from his belief in the immortality of the soul and in the perpetuity of the universe. For his defense of the metaphorical interpretation of the creation myth in the *Timaeus* shows that he must have been aware of the necessary connection of ἀγένητον and ἀνώλεθρον (cf. Plato, *Republic* 546 A, *Timaeus* 41 A 8-B 1). It is noteworthy that it is only to Plato that Aristotle ascribes the doctrine that something which has come into being is imperishable, and that he does so because he interprets literally the creation myth of the *Timaeus*. Cf. my *Creation Myth*.

²³⁰ Cf. F 36 with note 119 there.

and since the mind could hardly be "below" the soul and has no place "above" it, it is reasonable to infer that for Speusippus mind is a part or faculty or function of the soul; it is precisely that part or faculty of the soul that is the seat of knowledge.²³¹ Speusippus spoke of the mind as divine and/or of god as mind; and so it is likely that he conceived god as a completely wise soul.²³² He is the living "power" which governs the universe.²³³ There is no evidence for a cosmic soul in Speusippus' system. Moreover, the main function of the world-soul in Plato—to be the mover of the celestial bodies—is rendered unnecessary by Speusippus' doctrine that the celestial motions are inherent in the poles, which are extremes and points without magnitude, i.e. without dimension.²³⁴

Speusippus thought that knowledge of number is direct, and so it must somehow inhere in the soul. But even if he considered the soul to be ungenerated and imperishable, we do not know how he explained its direct knowledge of number. Nor do we have any evidence about his attitude towards metempsychosis; for it is surely unwarranted to infer, as some scholars do, that Speusippus' sympathy for Pythagoreanism implies his acceptance of this doctrine.

e) *The Universe and the Sensibles*

There is indirect evidence that Speusippus considered the sensible particulars to be substances.²³⁵ They are kinds of monads or points, and their essence is to be the focus of all the relations that make each thing different from everything else.²³⁶ Unlike the mathematical and the soul, they come to be and pass away. Nothing is known about their principles.

According to Theophrastus (F 59), Speusippus paid little attention to the sensible universe. His testimony, however, as the context indicates, must be taken to refer to the relation of the sensibles to the principles of number. But Speusippus differed from the main doctrine Theophrastus criticizes in that he posited different prin-

²³¹ Cf. F 58 with comm. *ad loc.* Cf. also the use of *διάνοια* in F 73.

²³² Cf. F 58 with comm. *ad loc.*

²³³ Cf. F 56a-b with comm. *ad loc.* and F 28, lines 13-14 with comm. *ad loc.* and note 228 *supra*.

²³⁴ Cf. F 62 with comm. *ad loc.*

²³⁵ Cf. F 29a and F 37 with comm. *ad locc.*

²³⁶ Cf. F 63a with F 66a-b and comm. *ad loc.*, and pp. 56-60 *infra*.

ciples for each kind of substance. Be that as it may, there is considerable evidence that he did pay attention to the sensibles in his theory of knowledge, classification, and definition.²³⁷

There is also evidence that he concerned himself with the physical universe as a whole. I have mentioned before his explanation of the celestial motions. Because of the widespread notion that Speusippus adopted the "Philolaic system," it must be emphasized that there is no evidence whatever in favor of that view.²³⁸ Plutarch has preserved Speusippus' definition of time, a definition in which the influence of Plato's *Timaeus* is conspicuous, as it is in Aristotle's.²³⁹ Reference has already been made to Speusippus' defense of the metaphorical interpretation of the creation myth in Plato's *Timaeus* and to the likelihood that he himself believed in the perpetuity of the cosmos. Finally, there is some evidence (F 85) that he believed the substance of the sun to be fire.

f) *An Episodic Universe?*

Aristotle raises two main objections against the Speusippean doctrine of several kinds of substances, each of which has its own peculiar principles: (a) Such a universe would merely be a series of disconnected episodes, since the existence or non-existence of one kind of substance has no effect whatever upon the existence or non-existence of any other kind of substance. In short, the Speusippean world is not a real cosmos, is not a whole of inter-related parts, because it lacks internal order (τάξις).²⁴⁰ (b) Speusippus' doctrine that each kind of substance has its own peculiar principles results in his failure to posit a separate final cause for the whole universe.²⁴¹ Moreover, because he posited separately existing mathematical numbers as the first entities and the One as their principle, he even had to deny the predicate goodness to his One.²⁴²

The first objection presupposes Aristotle's notion that the plurality of *material* principles causes the episodic character of the

²³⁷ Cf. F 6-27, F 63a-b, F 66a-b, F 67, and pp. 64 ff. *infra*.

²³⁸ Cf. F 83 with comm. *ad loc.*

²³⁹ Cf. F 60 with comm. *ad loc.*

²⁴⁰ Cf. F 30 and F 37 with comm. *ad locc.*

²⁴¹ Cf. F 30 with comm. *ad loc.* and the texts referred to in the next note.

²⁴² Cf. F 42a, F 43, F 44, F 45a, F 46a with comm. *ad locc.*

Speusippean universe. For Aristotle believes that, if the "matter" of each kind of substance is truly different from that of any other kind of substance, there can be no essential connection between the several kinds of substances.²⁴³ The cogency of this objection itself depends upon the validity of Aristotle's rejection of Speusippus' conception of similarity as a real unifying bond among the different kinds of substances. But despite the scanty evidence we have about Speusippus' "material" principles, this much can be said with reasonable probability: The material principle of magnitudes is similar to multiplicity but not identical with it. On the basis of the analogous similarity of the point to the One, we may infer that the material principle of magnitudes presupposes the existence of multiplicity because of its similarity to it, just as the point presupposes the existence of the One. If this is so, the bond of similarity between the material principles is an essential one. It is noteworthy that in *Metaphysics* 1085 B 1-4 (= F 51) Aristotle admits the possibility in the case of magnitudes of several material principles which imply one another and that his objection to it is not cogent.²⁴⁴ I have discussed Aristotle's objection for what it is worth. In fact, however, there are good grounds for thinking that he has misinterpreted the function of the Speusippean principles precisely because he considers each pair of principles to be equivalent to his own contrariety of form and matter. In short, the validity of Aristotle's interpretation of the Speusippean universe as a series of disconnected episodes really depends upon his rejection of similarity as a real unifying bond among the classes; and the cogency of his objections to this aspect of similarity is questionable.²⁴⁵

Even apart from this, it is not at all clear that Aristotle is right in contending (*Metaphysics* 1090 B 13-19 = F 37) that the implication of Speusippus' doctrine is that, even if numbers did not exist, nevertheless magnitudes would exist; and that, even if magnitudes did not exist, nevertheless the soul and the sensibles would exist. For in all probability Speusippus would not have admitted these

²⁴³ Cf. F 37 with comm. *ad loc.*, F 51 with introductory note and comm. *ad loc.*, and note 223 *supra* with the corresponding remarks in the text.

²⁴⁴ Cf. p. 46 f. *supra*.

²⁴⁵ Cf. pp. 63-64 *infra*.

inferences, though Aristotle thinks he would.²⁴⁶ He could argue that the existence of magnitudes presupposes that of numbers, just as the existence of soul and the sensibles presupposes that of numbers and magnitudes, because the knowledge and the existence of numbers are a necessary condition of our knowledge of magnitudes, and so on.²⁴⁷ What is here ultimately at issue between Speusippus and Aristotle is the question of the ontological status of numbers and magnitudes; and in this respect Aristotle's doctrine is no less difficult than Speusippus'.²⁴⁸ However that may be, it is ostensible that at least Speusippus did not conceive his several kinds of substances as disconnected from one another and that there is some sort of internal order among them.

Concerning Aristotle's second objection, surely Speusippus did not posit a supreme principle as the final cause of all his substances, and he denied that goodness is a meaningful predicate of the One. In short, teleology is not the determining factor among *all* the Speusippean substances, for there can be neither purpose nor goodness in numbers and in magnitudes. Purpose, goodness, and evil Speusippus conceived only in relation to living beings (cf. also note 466 *infra*). However, it appears that Speusippus did offer a teleological explanation of the "physical" universe and of the whole of nature. For he did postulate the existence of a god whom he conceived as a living force and as a mind which governs the cosmos.²⁴⁹ Moreover, for his objection to be a valid refutation of the whole Speusippean universe from numbers to sensibles, Aristotle's own doctrine of the unmoved mover as the separate final cause of the whole universe would have to be free of inconsistencies and contradictions, which it is not.²⁵⁰

²⁴⁶ N.b. *Metaphysics* 1090 B 16-18 (= F 37) μή ὄντος γὰρ τοῦ ἀριθμοῦ οὐθὲν ἦττον τὰ μεγέθη ἔσται τοῖς τὰ μαθηματικὰ μόνον εἶναι φαμένοις, and compare with Aristotle's words in *Eth. Nic.* 1153 B 6-7 (= F 80a) οὐ γὰρ ἂν φαίη (sc. Σπεῦσιππος) ὅπερ κακόν τι εἶναι τὴν ἡδονήν, a statement on which depends the validity of his argument against Speusippus' doctrine of pleasure as evil, and which is contradicted by Aristotle himself in *Eth. Nic.* 1173 A 5-13 = F 81a (cf. comm. on F 80a-F 81b and pp. 78-83 with note 389 *infra*).

²⁴⁷ Cf. pp. 53 ff. *infra*.

²⁴⁸ Cf. pp. 26-32 *supra*.

²⁴⁹ Cf. F 28, lines 13-14, F 56a-b, and F 58 with comm. *ad locc.* Cf. also pp. 47-48 *supra*.

²⁵⁰ Cf. Cherniss, I, pp. 461-474, 581-602, who shows that Aristotle's conception of the unmoved mover as the final cause of the universe is difficult and often impossible to harmonize with his doctrine of efficient causality, natural place, and the motion of the first body, the ether.

According to Aristotle, *Metaphysics* 1091 A 33-36 (= F 44), Speusippus thought that the good is "later born" and that it does not appear until the nature of things has gone forward. As the context indicates, and as also other related passages in Aristotle suggest, this doctrine amounts to the following propositions: (a) Goodness and beauty are not found among the principles, nor among the first entities, namely, numbers and magnitudes. (b) The good requires the completion of a process of natural development such as is found only among living beings; for, even in the case of plants and animals, goodness, beauty, and perfection are in the products, not in the seed or sperm, i.e. not in their "principles."²⁵¹ None of Aristotle's statements implies that there is an evolutionary process within the Speusippean universe, nor an atemporal "procession" in the manner of the Neoplatonists, nor derivation or generation of one kind of substance from any other kind of substance. Moreover, each of these doctrines is incompatible with essential tenets of Speusippus' system according to Aristotle's own testimony: for Speusippus postulated the existence of several kinds of substances, each of which has its own peculiar principles; and his numbers and magnitudes are eternal, immutable, and separately existing entities. Precisely because of this, numbers and magnitudes are neither derived nor generated even from their respective principles. It has been shown that Aristotle's "reports" about the alleged generation of mathematical are merely the result of the necessary implications of Speusippus' doctrine as he has first reconstructed it. Finally, the biological analogy he gave as an *a fortiori* argument to deny goodness to his principles does not imply an evolutionary process of any kind among the several classes of substances.²⁵²

²⁵¹ Cf. F 42a, F 43, and F 44, with comm. *ad locc.*

²⁵² Cf. F 43 with comm. *ad loc.* and pp. 32-47 *supra*.

CHAPTER THREE

EPISTEMOLOGY AND LOGIC

There is some evidence concerning a few basic tenets of Speusippus' epistemology and of his doctrine of classification and definition. For the most part this evidence is, once more, the testimony of Aristotle, who unfortunately tells us little or nothing about Speusippus' motivations. Therefore, in this chapter it will be necessary to reconstruct by inference at least some of the reasons why Speusippus adopted his epistemological doctrines.

a) *Theory of Knowledge*

The doctrine that only the separately existing numbers and magnitudes are real objects of knowledge and that apart from the direct knowledge of number all other knowledge is derivative, entails the rejection of the hypostatization of any and all universals and is incompatible with any form of conceptualism and nominalism as well. How then did Speusippus explain the mind's discursive knowledge of all other entities but numbers? It appears that he explained it by means of the notions of identity, difference, and similarity, which the mind disengages, so to say, from its direct knowledge of numbers.²⁵³

It is necessary to bear in mind that for Speusippus number means denominative number, and so that any number is for him a congeries of abstract and homogeneous monads.²⁵⁴ If the mind has direct knowledge of such numbers, it is possible to surmise how from this direct knowledge it would be able to derive the notions of identity, difference, and similarity. Each number must of course be identical with itself and different from any other number. But

²⁵³ On identity and difference cf. F 63a-b, F 64, F 67, F 68a-c, F 69a-b, with comm. *ad locc.* On similarity cf. F 6-27, F 28, lines 8-9, 33-36, 47, 55, 58-59, F 29a, F 51, F 65, F 66a-b, F 67, F 68a-c, F 70-71 with comm. *ad loc.* That the mind disengages these three notions from its knowledge of numbers is an inference from the fact that the mind has direct knowledge of the separately existing numbers only and that without these three notions it would be impossible for it to know the other kinds of substances, since magnitudes are similar to numbers, and so on (cf. pp. 49-51 *supra* and pp. 54-62 *infra*).

²⁵⁴ Cf. chapter II, a with note 78 there.

it is possible to be more specific. For there is evidence that Speusippus associated identity with equality, and equality with the number one because, like one, equality is conceptually indivisible.²⁵⁵ And so, any formula of numerical equality, e.g. $1 = 1$ or $1 + 1 = 2$, will yield, on Speusippus' presuppositions, the notion of identity. Similarly, Speusippus thought that any *two* numbers must be different from each other, and so that *difference* (i.e. one difference) *begins with two*, two differences with three, and so on.²⁵⁶ Finally, it is not difficult to see that reflection upon the relation among the terms of a geometrical progression such as 2, 4, 8, 16, etc.,²⁵⁷ or upon "similar numbers"—a doctrine that must have been known to Speusippus²⁵⁸—will yield the notion of similarity in general and also of proportional similarity. It appears, then, that for Speusippus identity is epistemologically prior to difference, and both to similarity; and there is additional evidence to support this interpretation.²⁵⁹

Now Speusippus seems to have thought that these three notions are inherent in sense-perception also, for he postulated that perception (*αἰσθησις*) participates in the cognitive power of reason (*λόγος*) and is a faculty with an innate and unerring power to *discriminate* its objects.²⁶⁰ Since the objects of perception are tridimensional, and since the properties of tridimensional magnitudes belong properly to the objects of the science of geometry, Speusippus postulated that abstract mathematical solids as such have separate existence and are objects of geometrical knowledge.²⁶¹ He also thought that point, line, and plane must be separately existing entities because they are extremes and limits, each of the magnitude

²⁵⁵ Cf. F 28, lines 44-46 (cf. also F 28, lines 51-52) with notes *ad loc.* On equality as indivisible cf. also F 80a-F 81a with F 82 and comm. *ad locc.* and pp. 83-85 *infra*.

²⁵⁶ Cf. F 28, lines 46-49, 52-59 with notes *ad locc.*

²⁵⁷ In F 28, lines 36-38 only the arithmetical progression or proportion is mentioned, but it is said that there are others; and we know that the geometrical progression and proportion was well known in Speusippus' time, cf. comm. *ad loc.*

²⁵⁸ For it was known to Plato and to the author of the *Epinomis*. Cf. *Timaeus* 31 B-32 C and *Epinomis* 990 D-E with Tarán, *Academica*, pp. 330-332.

²⁵⁹ Cf. pp. 64-66 *infra*.

²⁶⁰ Cf. F 75 with comm. *ad loc.* and pp. 57-58 and 64-65 *infra*.

²⁶¹ This follows from F 28, lines 33-36, 38-39, 61-62, F 36, F 50, F 53, F 72-74, with comm. *ad locc.*

that, from the point of view of the number of dimensions, comes immediately after it: the point of the line, the line of the plane, and the plane of the solid. This means that the minimal indivisible magnitude is the point.²⁶² Since knowledge of the point itself, however, presupposes knowledge of the monad or one, Speusippus postulated that the point as the principle of magnitude is similar to the number one, which is the principle of number.²⁶³ In short, knowledge of the point, and hence of all magnitudes, is derivative or indirect; and so *a fortiori* is also our knowledge of all other kinds of entities, since any entity is like a monad or point.²⁶⁴ There is no need to discuss here the several kinds of similarities that Speusippus saw between numbers and magnitudes, some of which are undoubtedly forced and/or naive.²⁶⁵ But there are good grounds to think that for him the properties of, and the relations between, numbers are the pattern of the whole of reality.²⁶⁶ In a second degree this is also true of magnitudes. Though similar to numbers, they are nevertheless separately existing objects of knowledge, and their properties as magnitudes must be the pattern of all other entities but numbers. An indication that this is so is the notion that any entity is similar to a point.²⁶⁷

Speusippus believes that *conceptually* we derive the line from the point, the plane from the line, and the solid from the plane. This is the meaning of his statement that the point is the first principle of magnitude, the line the second, the plane the third, the solid the fourth.²⁶⁸ The conceptual derivation of magnitudes ultimately from the point he probably explained by his theory that the line is the "fluxion" of the point, the plane of the line, and the solid of the plane.²⁶⁹ This theory of "fluxion," which is to be interpreted in a metaphorical sense,²⁷⁰ enabled him to give definitions of line, plane, and solid;²⁷¹ and it is noteworthy that some of them are

²⁶² Cf. F 50 with comm. *ad loc.*, the references to F 28 cited in the previous note, and pp. 44-45 *supra*.

²⁶³ Cf. F 51 and F 65 with comm. *ad locc.* and pp. 44-45 *supra*.

²⁶⁴ Cf. F 63a with F 66a-b and comm. *ad locc.*

²⁶⁵ Cf. F 28, lines 43-60 with the notes *ad loc.*

²⁶⁶ Cf. F 28, lines 10-14 with notes *ad loc.*, F 28, lines 43-62, F 51, F 65, and note 228 *supra*.

²⁶⁷ Cf. notes 182 and 264 *supra*, and F 53 with pp. 31-32 *supra*.

²⁶⁸ Cf. F 28, lines 60-62.

²⁶⁹ Cf. F 52 with comm. *ad loc.*

²⁷⁰ Cf. F 72 with comm. on F 72-74 and F 61a-b with comm. *ad loc.*

²⁷¹ On Speusippus' definition of point cf. Appendix I.

similar to the corresponding Euclidean definitions and postulates.²⁷² Proclus has preserved for us Speusippus' explanation of the rôle geometrical constructions play in the acquisition of theoretical knowledge.²⁷³ He held that there is really no construction or generation of the triangle, for example, because it is an eternally existing entity, but that we simply come to know it in the process of its being constructed. For this reason Speusippus thought that all derivative knowledge about eternally existing entities should be called "theorem" (θεώρημα) and not "problem" (πρόβλημα), as it usually was. It is significant that in this context the word "theorem," which literally means "sight," "thing seen," refers to the mind's contemplation of a mathematical object. Therefore, it ought to be clear that for Speusippus the knowledge he calls "theorem" is wider than demonstration (which it undoubtedly includes), for it refers to any kind of derivative knowledge about eternal entities. Direct knowledge he called "axiom" (ἀξιωμα);²⁷⁴ and we may infer that for him this "axiomatic" knowledge can refer only to the mind's direct apprehension of the separately existing numbers with all their inherent properties and relations.²⁷⁵ The implication of Proclus' testimony in F 72 seems to be that Speusippus did not object to the use of "problem" in the case of disciplines like mechanics, in which there is real construction of their objects. This may have had some sort of application to the question of artefacts;²⁷⁶ but we have no evidence about this topic in Speusippus.

Concerning the knowledge of the soul in Speusippus' system²⁷⁷ we may infer that it is derivative, and that the principles of soul must be similar to those of magnitudes. In any case, the soul, like

²⁷² On the definition of point cf. Appendix I. Compare Speusippus' definition of line as the fluxion of a point with Euclid's *Postulates* 1 and 2; Speusippus' definition of plane as the fluxion of a line with Euclid's *Definition* 5. The point I am trying to make is simply that Speusippus' "definitions" by means of "fluxion" have a similar purpose to a geometer's definitions or postulates.

²⁷³ On this and on what follows cf. F 72 with comm. on F 72-74.

²⁷⁴ Cf. F 36 and F 73-74 with comm. *ad locc.*

²⁷⁵ Cf. notes 100-110 *supra* with the corresponding remarks in the text. For Speusippus the deduction of the properties of, and relations between, numbers is not derivative knowledge because these properties and relations are implicit in our direct knowledge of numbers.

²⁷⁶ A question much debated in the Academy cf. Cherniss, I, pp. 239-260.

²⁷⁷ On the soul cf. F 54-58 with comm. *ad locc.* Chapter II, d *supra*.

any other entity, must be like a monad or point. Since Speusippus believed in the immortality of the soul, and perhaps also that it is ungenerated, its status as an object of knowledge that has motion ²⁷⁸ must be somehow intermediate between the eternally existing and immutable mathematical, on the one hand, and the sensibles which come into being and pass away, on the other.

We are better informed about the status of the sensibles in Speusippus' epistemology; they are the objects his diaeresis classifies.²⁷⁹ He thought that a sensible particular, which is a kind of monad or point, is merely the focus of all the relations that make it different from everything else. Also, that an exhaustive classification of the whole of existence, in which the relations of identity, difference, and similarity of each thing in respect to every other thing and to the whole are specified, is the necessary condition of our knowledge and definition of anything,²⁸⁰ except, as we shall see, numbers, magnitudes, and perhaps also the soul.

This classification requires that in its construction a fundamental rôle be assigned to perception. For, given Speusippus' doctrine that there is direct knowledge of numbers only and that from it the fundamental notions of identity, difference, and similarity are derived, the mind could not even begin to classify the sensibles unless perception provided it with reliable information about them. And there is evidence that Speusippus did ascribe to perception an innate and unerring power of apprehending its objects. This means that in perception there is a preliminary comparison, analysis, and classification of the data provided by the senses and, hence, that a certain power of abstraction belongs to it.²⁸¹ So far we have discussed perception from an epistemological point of view. But Speusippus also had to ascribe to it a fundamental rôle in connection with the psycho-physical experience that ultimately results in knowledge. Otherwise, given his presuppositions,

²⁷⁸ Either essentially or accidentally because it is in a body. Soul must also be subject to change since men may become good or evil, cf. F 57, F 77-84; and the fact that the soul is the organ of knowledge (cf. note 230 *supra*) also implies that soul is involved in change.

²⁷⁹ Cf. F 6-27, F 63a-b, F 66a-b, F 67. Neither numbers nor magnitudes are the objects of diaeresis because diaeresis seems to be connected with the notion that an entity is merely the focus of all its relations, and this probably excludes the soul also. Cf. pp. 60-62 *infra*.

²⁸⁰ Cf. F 63a-b, F 66a-b, and F 67 with comm. *ad locc.*

²⁸¹ Cf. F 75 with comm. *ad loc.*

he would have had to give up the possibility of *all* knowledge. For, unless perception provides the mind with some sort of infallible information, how could we as embodied souls ever have any knowledge even of numbers? There is evidence, however, that Speusippus did ascribe temporal and psychological priority to perception,²⁸² though he thought that epistemologically the knowledge of number is prior.

Speusippus' conception that any entity is like a point (F 66a) and that knowledge of each thing requires knowledge of all the differentiae which make it different from every other thing, entails the identification of any entity with all its differentiae.²⁸³ And, since the differentiae are established by means of the notions of identity, difference, and similarity, it follows that the very essence of anything is simply to be the focus of all the relations that make it different from everything else and that knowledge of anything requires knowledge of the whole system of relations. It is therefore intelligible that for Speusippus an exhaustive classification of the whole of existence is the necessary condition of knowledge and definition. This doctrine requires that the distinction between essential and accidental attributes be disregarded; and there is evidence that in his classification and in his definitions Speusippus admitted accidental attributes, a feature for which he is severely criticized by Aristotle.²⁸⁴

Speusippus, then, is probably the first Western philosopher who gives to the total system of relations a fundamental rôle in ontology and epistemology. However, because he also thought that numbers and magnitudes have separate existence and are as individual entities—neither as classes nor as concepts—real objects of knowledge, it is necessary to make the following distinctions. For Speusippus every mathematical number has separate existence and is therefore a unit. The essence of every such number (with the exception of one, which for Speusippus is the first number) is to be a determinate multiplicity and, as such, to occupy a place in the ordered series of the integers. Hence, all its relations to the other numbers must be a part of the essence of each number. And yet according to Speusippus the mind's knowledge of *each* number

²⁸² Cf. F 76 with comm. *ad loc.*

²⁸³ Cf. F 63a with F 66a and comm. *ad locc.*

²⁸⁴ Cf. note 292 *infra*.

must be direct; the properties of, and the relations between, the numbers themselves depend upon, or are implied in, the quantitative determination that each number is.²⁸⁵ Aristotle, who himself subscribes to the doctrine of denominative number, puts this succinctly in *Metaphysics* 1083 A 10-11 when he asserts that in the case of numbers people say (φασίν) that quality belongs to them after quantity.²⁸⁶ An indication that Speusippus himself gave epistemological priority to the knowledge of each number over the knowledge of its relations to other numbers is the fact that he considered one to be both the first number and the principle of number. The case of magnitudes is similar. The point is like the One or monad, and every other magnitude is similar to one or more numbers. And so, in addition to their relations to each other, magnitudes are also related to numbers.²⁸⁷ Nevertheless, each magnitude is a substantial entity and is apprehended by the mind as such.²⁸⁸ The exhaustive classification of all reality is not needed for our knowledge of magnitudes, only the knowledge of number is. An indication that this is so is the Speusippean definitions of line, plane, and solid, which in turn presuppose knowledge of the separately existing point and of its similarity to the One. In short, there is a difficulty in Speusippus' conception of numbers and magnitudes because, on the one hand, they have to function as individual entities which are the objects of knowledge, while, on the other hand, they ought to be nothing but relations. Be that as it may, it is clear that knowledge of numbers, which is direct, and of magnitudes, which is derivative, does not require knowledge of the whole system of relations.²⁸⁹ Consequently, Speusippus could hardly have objected to the possibility of self-evident truth, as some modern partisans of the primacy of relations have done. One cannot therefore refute him with the argument that there

²⁸⁵ Cf. note 275 *supra*.

²⁸⁶ Speusippus may be included among the subject of φασίν. N.b. that *Metaphysics* 1083 A 10-11 is part of the argument against incomparable numbers and that the passage comes immediately before Aristotle's criticism of Speusippus' separately existing mathematical numbers in F 34. Cf. the introductory note to that fragment.

²⁸⁷ Cf. F 28, lines 38-60, F 51, F 65.

²⁸⁸ Cf. F 28, lines 33-36 and 38-39, F 36, F 50, F 72-74, with comm. *ad locc.*

²⁸⁹ Cf. also note 279 *supra*.

are such truths independently of our knowledge of the whole system of relations.²⁹⁰

If Speusippus believed that the soul is ungenerated and immortal, as he very likely did, then the soul like numbers and magnitudes is probably something more than the focus of all its relations to the rest of existing things.²⁹¹ The sensibles, however, are for Speusippus nothing but the foci of convergence of a given number of relations. And the evidence we have is that it is the sensibles that Speusippus undertook to classify by means of dichotomic diaeresis.²⁹²

In short, the Speusippean universe as a whole is a system of relations which ultimately depend upon, and take their meaning from, the separately existing numbers of which the mind has direct knowledge. The possibility of knowing numbers, magnitudes, and perhaps also the soul, independently of the whole system of relations is in accordance with Speusippus' metaphysical presuppositions: For numbers are known directly; knowledge of magnitudes requires that of numbers; and knowledge of the soul requires that of numbers and magnitudes. Knowledge of the sensibles, on the other hand, presupposes knowledge of the first three kinds of substances. This whole conception is intimately connected with Speusippus' postulation of a bond of similarity among the classes;²⁹³ but for him this bond of similarity *among the classes* does not imply a symmetrical relation. The point, for example, is similar to the One, not vice versa.²⁹⁴ (From all this we can see why the ontological order of the substances is numbers—magnitudes—soul—sensibles.²⁹⁵) There is, then, some sort of connection between Speusippus' bond of similarity among the classes (= S¹) and Plato's conception of imitation. Undoubtedly, this is one of the aspects of Speusippus' thought that may appropriately be called Platonism, particularly because it ultimately depends upon

²⁹⁰ Hence, his theory is not in all respects similar to those of Bradley and Joachim, as H. W. B. Joseph, *An Introduction to Logic*², pp. 194-195 appears to think, since he compares the two last mentioned philosophers with the doctrine Aristotle criticizes in *Anal. Post.* 97 A 6-22 (= F 63a).

²⁹¹ On the soul cf. chapter II, d.

²⁹² Cf. F 6-27, F 63a-b, F 66a-b, F 67.

²⁹³ On similarity among the classes cf. F 28, lines 8-9 with notes *ad loc.*, F 28, lines 43-60, F 29a with F 51, F 65, F 66a-b.

²⁹⁴ Cf. F 51 and F 28, lines 33-36 with comm. *ad loc.*, F 65.

²⁹⁵ Cf. also F 29a, F 37 and pp. 20-23 *supra*.

the notion of separately existing and immutable objects of knowledge. But there is also a fundamental difference between the two: For Plato the very essence of any particular consists in its similarity to the corresponding idea. A man is a man because he imitates, or participates in, the idea of man. For Speusippus instead the essence of any entity is not simply its similarity to a given number and/or magnitude; for that similarity is merely one of several relations, the sum total of which is the thing's essence.

The important Speusippean concepts of identity and difference appear also in Plato. But in the latter identity and difference are substantial ideas that "communicate" with each other and with all the other ideas (cf. note 344 *infra*). In Speusippus instead they, together with similarity, are the most general notions with which the mind operates and which ultimately, as we saw, it "disengages" from its direct knowledge of the numbers.

It is the task of diaeresis to determine the relations of the sensibles to each other and to the whole. But the objects the Speusippean diaeresis classifies are classes, not particulars.²⁹⁶ Since Speusippus admitted both essential and accidental attributes in his classification and in his definitions,²⁹⁷ it is necessary to say that the Aristotelian conception of genus and species has no place in his system. He did use the words *eidōs* and *genos*,²⁹⁸ and he may even have meant to refer with them, respectively, to less general and more general classes; but he can hardly have used them in the technical Aristotelian sense. For Aristotle's genera and species are established on the basis of essential attributes only, and his notion that the species is the actualization of the genus in the final differentiae²⁹⁹ is incompatible with Speusippus' conception of an entity as the focus of *all* its relations to every other entity and to the whole. In fact, for Speusippus all attributes, because they are relations, are "essential;" and, since relations are established by the determination of similarity, similarity itself is an essential bond.

The Speusippean classes are established by the similarity there

²⁹⁶ This follows from F 6-27, F 63a, F 66a-b, and F 67.

²⁹⁷ Cf. F 6-27, F 66a-b, F 67.

²⁹⁸ Cf. T 1, line 56; F 11 with comm. *ad loc.*; F 17 with comm. *ad loc.*; F 28, line 34.

²⁹⁹ Cf. e.g. *De Part. Animal.* 643 A 24-27 = F 67, and introductory note to F 63a.

is among the members of each class ($= S^2$). This similarity, unlike that which is the unifying bond among the classes ($= S^1$), is a symmetrical relation.³⁰⁰ Speusippus divides properties into individual and common.³⁰¹ In establishing the former the notion of difference is operative; in establishing the latter also the concept of similarity in its two aspects (S^1 and S^2). In each case similarities are established by discovery of the element common to two or more things. The result of this conception of similarity as a real unifying bond among the classes and within the classes is the unity of all knowledge as the knowledge of all the similarities.³⁰² This unity of all knowledge, this science of the whole of existence, is what we may call metaphysics or philosophy or ontology. This conception need not, and apparently did not for Speusippus, exclude the existence of particular sciences such as geometry, for example.³⁰³ But Speusippus would probably deny, as Plato himself denies it in the *Republic*, that geometry, when considered in its foundational aspect, is a truly autonomous science. For Plato the only autonomous science is dialectic, because the objects of geometrical and of all other knowledge are ideas;³⁰⁴ for Speusippus instead the only autonomous science is arithmetic, because numbers are the first entities and are directly apprehended by the mind. Since the properties of, and relation between, numbers are the pattern of the whole of existence, and since all other entities exhibit a relation of similarity to numbers, no other science can be truly autonomous.

Speusippus' epistemological conceptions are incompatible with several of Aristotle's doctrines. Here we need only consider two of Aristotle's objections: (a) He contends that Speusippus' theory

³⁰⁰ On the similarity within the classes, cf. F 6-27, F 67.

³⁰¹ Cf. F 28, lines 8-9, 17-18, etc.; F 65, F 67, F 70, F 71.

³⁰² Cf. F 70 and F 71 with comm. *ad locc.*

³⁰³ Speusippus tried to bind the sciences together by their common elements "as much as possible" (cf. F 70 with comm. *ad loc.*), and it is clear that each science has also its peculiar domain. Knowledge of the properties of the relations between, and operations on, numbers would be arithmetic. And even geometry, which presupposes knowledge of number, has its own peculiar principles and theorems.

³⁰⁴ Cf. *Republic* 509 D-511 E, 527 A-B, and 533 C-534 A with Shorey's notes in *Rep.* II, pp. 108-117, esp. p. 116, n.b, 169-171, esp. 169, n.f, p. 170, n.b, p. 171, nn. f and h, p. 202, n. f; Cherniss, I, n. 52, *AJP* 68 (1947), pp. 141-145 = *Selected Papers*, pp. 170-174, *Review of Metaphysics* 4 (1951), pp. 414-424 = *Selected Papers*, pp. 241-251.

cannot explain the unity of each substance; that in fact it cannot account even for the unity of number, since each number would merely be a heap of monads.³⁰⁵ (b) He rejects the Speusippean notion of similarity because it disregards the difference between essential and accidental attributes.³⁰⁶ Aristotle does not deny the existence of similarity, but objects to its unrestricted use as a unifying bond (i) among the classes (S^1) and (ii) within the classes (S^2). Concerning (i) his main objection is that Speusippus places within the same class things which are *generically* different;³⁰⁷ in the case of (ii) he contends that Speusippus divides homogeneous classes.³⁰⁸ In short, according to Aristotle the necessary result of Speusippus' double use of similarity is to disrupt the natural classes which are the genera and the species. Moreover, objection (a) is closely connected with objection (b); for it is in part the disregard of the difference between essential and accidental attributes that is responsible for Aristotle's contention that Speusippus' theory cannot account for the unity of substance and of definition.³⁰⁹

As Aristotle formulates them, these objections depend upon the validity of some of his own doctrines. But even apart from this, one must recognize that his objections point to serious difficulties in Speusippus' philosophy. For it is a hard doctrine that the essence of any entity is merely to be the focus of all its relations to every other entity and to the whole; that these relations are established by means of the notions of identity, difference, and similarity, with the consequent admission of accidental attributes; and that from its direct knowledge of number and from the data furnished by perception the mind is able to establish a complete classification of the whole of existence. It is also difficult to see how each universal concept can be merely the result of a certain number of relations; or how from the concepts of identity, difference, and similarity can emerge other concepts such as "man," "plant," "red," etc. Nevertheless, it must be said that in some cases Aristotle's objections are not cogent. Thus, for example, Speusippus

³⁰⁵ Cf. F 66a-b with introductory note and comm. *ad loc.*, *Metaphysics* 1075 B 34-36, F 63a with comm. *ad loc.*, *De Part. Animal.* 643 B 17-23 = F 67.

³⁰⁶ Cf. F 63a with comm. *ad loc.*, F 65 with comm. *ad loc.*, F 66a-b with comm. *ad loc.*, F 67 with comm. *ad loc.*, F 71 with introductory note and comm. *ad loc.*

³⁰⁷ Cf. F 65, F 67, and F 71 with comm. *ad loc.*

³⁰⁸ Cf. F 67 with comm. *ad loc.*

³⁰⁹ Cf. note 305 *supra*.

could account for the unity of number, since for him each number has separate existence. Aristotle's own objection in *Metaphysics* 1083 A 23-35 (= F 34) is based upon the incongruity that Speusippus' numbers are separately existing entities and mathematical numbers at the same time.³¹⁰ I have already pointed out that Speusippus failed to understand the concept of number, but also that Aristotle himself shared in the mistaken notion that numbers are congeries of units and that Aristotle's forms of numbers involve serious difficulties.³¹¹ Similarly, Aristotle has a valid point when he rejects Speusippus' single science of the whole of existence because it is based on the unrestricted use of similarity. But he is wrong in refuting Speusippus with his own doctrine of the complete separation of arithmetic and geometry because monads (i.e. the component units of numbers) and points (which Aristotle wrongly takes to be the elementary constituents of Speusippus' magnitudes) are generically different.³¹² For, even though the doctrine of separately existing mathematical numbers and magnitudes has serious difficulties, it seems that Speusippus is basically right in postulating a close connection between arithmetic and geometry. At least in this case it is not cogent to accuse him of illegitimately transferring demonstrations in one genus to another which is not subordinate to the first.³¹³ Nor is Aristotle's *absolute* distinction between genus and species necessarily right; and, if it is not, at least his unqualified rejection of Speusippus' bond of similarity among the classes (= S¹) has not been established.

b) *Classification, Diaeresis, and Definition*

We may assume, then, that by means of the notions of identity, difference, and similarity, which it disengages from its direct knowledge of number, and by the use of the information provided by perception, the mind, advancing step by step, apprehends other things by their consequences.³¹⁴ In this way it begins to establish

³¹⁰ Cf. F 34 and pp. 23-24 *supra*.

³¹¹ Cf. pp. 26-27 *supra*.

³¹² Cf. F 65 and F 71 with comm. *ad locc.* and introductory note to F 71.

³¹³ This is the implication of Aristotle's criticism in F 71, cf. comm. *ad loc.* On μετάβασις in F 73 cf. note 314 *infra*.

³¹⁴ Cf. F 73, where n.b. τὰ δὲ ἐκ τοῦ εὐθέως αἰρεῖν ἀδυνατοῦσα (sc. the mind) κατὰ μετάβασιν ἐπ' ἐκεῖνα διαβαίνουσα κατὰ τὸ ἀκόλουθον αὐτῶν ἐπιχειρεῖ ποιεῖσθαι τὴν θήραν. Here κατὰ μετάβασιν does not necessarily imply the illegitimate μετάβασις εἰς ἄλλο γένος, but refers simply to the mind's dis-

the exhaustive classification which for Speusippus is the necessary condition of knowledge and definition. After determining the properties of, and relations between, numbers, which are all implicit in our direct knowledge of them, the mind proceeds first to the investigation of magnitudes and then to that of the soul. The final step is to classify the sensibles, and it is the task of diaeresis to do that.

In *Anal. Post.* 97 A 6-11 (= F 63a) Aristotle outlines the arguments Speusippus advanced in support of his doctrine that knowledge of each thing requires knowledge of its differentiae in respect to everything else. The clear implication of that passage is that the first step in Speusippus' diaeresis consists in the strict application of the question whether two or more things are identical or different.³¹⁵ One is thus able to establish classes of identical things and, in some cases, also to determine which divisions are exhaustive. This means that Speusippus' diaeresis is strictly *dichotomic*. The principle of similarity is operative within the dichotomies, and so the determination of similarities which results in the establishment of further classes and in relating some classes of identical things to one another is the second step in the task of classification.³¹⁶ Sometimes a dichotomy is itself established on the basis of similarity; but even in such cases it is clear that the question of identity or difference must be prior to the establishment of similarities.³¹⁷ That the preceding is a fair description of how Speusippus established the diaeretical schema may be seen in the exhaustive classification of words which Simplicius has preserved for us.³¹⁸ But it is Aristotle himself who provides most of the evidence concerning Speusippus' diaeresis and his use of the concepts of identity, difference, and similarity. For the whole of chapters two and three of the first book of *De Partibus Animalium* (= F 67) is nothing

cursive procedure, which is to capture by their consequences things not known directly. This is not to deny that Speusippus may have illegitimately (from Aristotle's point of view) transferred demonstrations in one genus to another which is not subordinate to it. He might have done so because of his conception of the bond of similarity among the classes, which implies the subordination of all classes to the mathematical and of magnitudes to numbers.

³¹⁵ Cf. comm. on F 63a.

³¹⁶ Cf. F 67 with comm. *ad loc.* and the following note.

³¹⁷ Cf. *De Part. Animal.* 642 B 10-14, 643 A 31-35, B 3-8 and 19-23 = F 67 with comm. *ad loc.*

³¹⁸ Cf. F 68a-c with comm. *ad loc.*

but a unified argument against Speusippus' use of dichotomic diaeresis for natural classification.³¹⁹

Speusippus devoted at least two works to his classification: the treatise, in ten books, "On Similar Things"³²⁰ and the related work "Divisions and Suppositions Concerning Similar Things."³²¹ We have several fragments of the former work. Most of them have been preserved by Athenaeus, and they all probably come from the second book. In that book Speusippus was obviously concerned with grouping plants and animals into classes by the determination of similarities. Meager as they are, these fragments provide some evidence of how Speusippus distinguished between two classes on the basis of similarity and difference, and also of his division of a higher class into two lower ones.³²² Of the latter work we have no fragments. Even from its title we may infer that it was devoted to establishing the classification of similar things and that it had a close relation to the previous work.³²³ It is in fact likely that the treatise "On Similar Things" furnished the materials for the classification embodied in the "Divisions" and/or that it was some sort of classification preliminary to it.³²⁴ (A third work, which in the list of Speusippus' writings comes immediately after the two treatises mentioned above, "Concerning Paradigmatic Kinds and Classes," may also have been related to Speusippus' classification; but we know nothing about its contents.³²⁵) In the passage of the *De Partibus Animalium* mentioned above, Aristotle twice refers to "The Written Divisions," and there can be little doubt that by this he means a published work or works by Speusippus.³²⁶ The probability is that he has in mind one or both of the treatises just referred to, or that at least they were meant to be included in this general reference.

³¹⁹ Cf. F 67 with comm. *ad loc.*

³²⁰ Cf. T 1, line 54 and F 6-27.

³²¹ Cf. T 1, line 55.

³²² Cf. esp. F 8, F 9, F 13, F 17, with comm. *ad locc.*, and on F 6-27.

³²³ The very title of this treatise, *Διαιρέσεις καὶ πρὸς τὰ ὅμοια ὑποθέσεις*, coming immediately after the *Τῆς περὶ τὰ ὅμοια πραγματείας α' . . . ι'*, shows that it could not have been part of the latter work, as Kullmann, *Wissenschaft und Methode*, p. 150, n. 50 would have it.

³²⁴ Cf. Lang, pp. 15, 17, and 21-22, Stenzel, cols. 1640-1641 and 1648-1649, Cherniss, I, p. 56 with n. 45.

³²⁵ Cf. T 1, 56 *Περὶ γενῶν καὶ εἰδῶν παραδειγμάτων*.

³²⁶ Cf. 642 B 12 and 643 A 36 = F 67 with pp. 403-406 *infra*.

To learn more about Speusippus' classification we must turn to F 67. It is important to bear in mind that in other works Aristotle establishes rigid rules for dichotomic diaeresis, that these rules depend upon some of his metaphysical doctrines, and that Aristotle himself makes use of dichotomic diaeresis for the establishment of definitions.³²⁷ But in *De Part. Animal.* I. 2-3 (= F 67) he rejects the use of dichotomic diaeresis for classification. His objections there are specifically directed against the use of dichotomic diaeresis for natural classification; it is clear, however, that he rejects it as a method for classifying any kind of entities, and in one passage he explicitly says so.³²⁸ Aristotle's basic objection to the use of dichotomic diaeresis for classification is that by the use of this method it is impossible to reach the infimae species. This in turn presupposes his conception that the relation of genus to species represents objective ontological relations and that the species is the actualization of the genus in the final differentiae.³²⁹ Aristotle's several arguments fall under three general headings: (a) Dichotomic diaeresis can at best furnish a single differentia; but the infimae species of animals are characterized by multiple differentiae. (b) Dichotomic diaeresis cannot avoid using privative terms; but privative terms are useless for classification because in dichotomic diaeresis they cannot furnish differentiae. (c) Dichotomic diaeresis cannot avoid disrupting homogeneous classes because it disregards, and must disregard, the difference between essential and accidental attributes.³³⁰

It is not necessary to discuss here the validity of Aristotle's strict rules for dichotomic diaeresis and whether his own use of this method for the establishment of definitions is consistent with those rules.³³¹ But, before discussing his objections to Speusippus' use

³²⁷ Cf. Cherniss, I, pp. 27-48 and 59-63, and F 63a with comm. *ad loc.* Aristotle's objection to Speusippus in F 63a, that the person who uses dichotomy for the purpose of establishing a definition need not know all things, ignores the metaphysical presuppositions of Speusippus' system. In addition, Aristotle's use of dichotomy there is incompatible with his own conception of dichotomic diaeresis (cf. Cherniss, I, pp. 52-54) and takes for granted the knowledge of the definiendum from the start, a fact which betrays difficulties in Aristotle's theory of knowledge (cf. note 136 *supra*).

³²⁸ Cf. 643 A 16-18 = F 67.

³²⁹ Cf. 643 A 24-27 = F 67 with note *ad loc.*

³³⁰ On (a) cf. 642 B 5-9 and 643 B 26-644 A 11; on (b) cf. 642 B 21-643 A 27; on (c) cf. 642 B 10-20, 643 A 27-B 26.

³³¹ Cf. the references to Cherniss in note 327 *supra*.

of dichotomy for natural classification, we must first point out what we can learn about Speusippus' method. For, while some of Aristotle's arguments are directed against Speusippus' actual procedure, others are directed against the necessary implications of dichotomic diaeresis according to Aristotle's own rules. To begin with, it is clear that Speusippus' diaeresis is strictly dichotomic and with both sides of the bifurcation equally extended.³³² Secondly, that the establishment of similarities played a fundamental rôle in his classification.³³³ Thirdly, that in establishing his classes Speusippus made use of common names and, in this and other respects, admitted accidental attributes.³³⁴ Fourthly, that he made use of private terms.³³⁵ Finally, that Speusippus introduced new criteria of division into a given dichotomy, and so he not always divided by a differentia of the previous differentia.³³⁶ Hence Aristotle's contention that the Speusippean classes are not real units but that, like his definitions, they have the artificial unity of conjunction only.³³⁷

Now, as it has been pointed out, there is a real difficulty in Speusippus' doctrine that an entity is merely the focus of all the differentiae which make a thing different from everything else. However, if we grant him this notion, Aristotle's objections against Speusippus' use of dichotomic diaeresis for classification are not cogent because he ignores the purpose of his adversary's division. For Speusippus was not trying to establish a natural classification of living beings on the basis of genera and species but to determine the sum total of the relations of each class with respect to every other class and to the whole. Given his assumptions, he has to admit accidental attributes with all the consequences that this admission entails. It is therefore not the case that his ultimate classes, i.e. Aristotle's *infimae species*, e.g. man, are characterized by a single final differentia, be it a positive differentia or a purely negative one. That they are so characterized is merely Aristotle's inference from the necessary consequence of the use of dichotomy

³³² Cf. esp. 642 B 5-6, 21-22, 643 A 16-24, B 9-13, 19-20, 26-28, 644 A 10-11.

³³³ Cf. esp. 642 B 10-20, 643 A 35-B 8, B 17-23. Cf. also F 6-27.

³³⁴ Cf. esp. 642 B 10-20, 643 A 27-B 8, B 17-23.

³³⁵ Cf. 642 B 21-643 A 27, 643 B 19-20, etc.

³³⁶ Cf. esp. 643 B 17-23.

³³⁷ Cf. 643 B 17-26 with F 66a-b.

for classification according to his own rules.³³⁸ And, since his doctrine of the unity of substance and of definition and his conception of the species is closer to the truth than Speusippus', his discussion in F 67 is valuable. Yet Aristotle himself testifies to the fact that Speusippus introduced new principles of division into a given dichotomy; it is clear from this, as well as from Aristotle's own testimony elsewhere,³³⁹ that Speusippus' ultimate classes are not characterized by a single final differentia but by multiple differentiae. And so Speusippus also could argue that by the use of privative terms *within* a given dichotomy he can provide real differentiae, just as Aristotle claims that his method of immediately dividing the genus by multiple coordinate differentiae does provide them.³⁴⁰ Of course, Aristotle's general objection to the use of purely privative differentiae in strict dichotomy is valid. In short, then, Speusippus' conception of the unity of substance is the real issue between him and Aristotle, not primarily his use of dichotomic diaeresis for natural classification. This is not to deny that the use of dichotomy as such for natural classification presents perhaps insurmountable difficulties.

Since Speusippus' doctrine of the unity of definition depends upon his conception of the unity of substance, it stands or falls with

³³⁸ Given his conception of relations, Speusippus cannot subscribe to Aristotle's doctrine that the species is the actualization of the genus in the final differentiae so that all the preceding differentiae are superfluous. For him each differentia represents a relation which is not sublated by the final differentia. In short, every general characteristic is present in every successive step of the division, and so the final class has multiple differentiae. *In this respect* Speusippus' diaeresis is similar to that of Plato (cf. *Sophist* 232 B ff. and 264 D-268 D, Cornford, *Plato's Theory of Knowledge*, pp. 320-324), whose doctrine is also incompatible, though for other reasons, with the Aristotelian conception of genus and species, and of diaeresis.

³³⁹ Cf. F 63a and F 66a-b with comm. *ad locc.*

³⁴⁰ Cf. 643 B 17-26. The other point Aristotle makes in this passage, that Speusippus violates the rule of always dividing by a differentia of the previous differentia, could still be valid, except that in some cases strict adherence to this rule would make dichotomy altogether impossible.

One other point should be made here. That Speusippus used differentiae such as "tame" and "wild" does not necessarily support the cogency of Aristotle's objection in 643 B 3-8 (= F 67, cf. *ad loc.*) that this would be tantamount to dividing identical species, e.g. men, horses, etc. For even apart from the fact that in Speusippus "tame" and "wild" are not equivalent to Aristotelian specific differentiae, he grouped men and horses into single final classes which cannot be further divided; moreover, he can argue that by "tame" he means all those animals that are or can be tame, whether or not some individuals are actually tame or not.

it, and one must admit that the latter is the case.³⁴¹ But perhaps there is no need to suppose that in order to offer a scientific definition Speusippus required that all the differentiae of a thing be actually enumerated. What he obviously did require is the establishment of an exhaustive classification of the whole of existence. Yet perhaps he thought that this classification made it possible to start a definition at a "lower" point of a division. However this may be, his extant definitions do not enumerate all the differentiae of a thing,³⁴² though it is of course possible that he did not mean them to be scientific definitions.³⁴³

The Speusippean diaeresis, then, depends upon the notion that the unity of each substance consists in being the focus of all its relations in respect to everything else and to the whole. Hence, it is clear that for Speusippus the diaeretical schema reflects objective ontological relations and not purely conceptual ones. This doctrine is incompatible with Plato's theory of ideas as the hypostatization of all universal concepts and with his conception of diaeresis as well. The ideas being what they are, i.e. perfect, eternal, and immutable individuals existing outside of space and time, it is clear that for Plato a less general idea does not sublimate a more general one and that a more general idea is not in any sense whatever an element of a less general idea. The relations between the ideas are the strictly logical ones of compatibility, incompatibility, and implication; this is the meaning of Plato's "communication" among the ideas.³⁴⁴ Hence, diaeresis for Plato, be it dichotomic or not,³⁴⁵ is merely a practical heuristic method, the usefulness of which consists in its help to narrow down the field of search for a given idea. Since the relations among the ideas are purely logical ones, the diaeretical schema does not reflect objective ontological relations, as it does from different points of view for Speusippus and Aristotle. Plato assumes direct knowledge of the ideas from

³⁴¹ Cf. F 66a-b with comm. *ad loc.* and pp. 62-63 *supra*.

³⁴² Cf. F 60 and F 77, with comm. on T 1, line 64.

³⁴³ It is noteworthy, however, that in F 63a Aristotle objects to Speusippus' notion that the person who divides and defines must know all things, and not to the requirement that all the differentiae of the definiendum must be enumerated in the definition.

³⁴⁴ Cf. Plato, *Republic* 476 A, *Sophist* 254 B-257 A, Shorey, *Rep.* I, p. 516, n.f. Cf. also *Phaedo* 103 C-105 B with Robin, *Platon* (Paris, 1935), pp. 109 and 274, and Cherniss, I, n. 128.

³⁴⁵ Cf. p. 403 f. *infra*.

the start and believes that "knowledge" is merely the recovery of the pre-natal vision of the ideas; in short, that what we call knowledge is merely recollection.³⁴⁶ For him diaeresis is a practical method which is useful in the process of *anamnesis*.³⁴⁷ There is evidence that according to Plato there are shorter and longer ways in diaeresis and that he admitted the fallibility of this method, since he thought that by the use of diaeresis alone one may obtain different definitions of the same thing.³⁴⁸ It has therefore been suggested³⁴⁹ that the incompatibility of the theory of ideas with his conception of diaeresis was one of the reasons why Speusippus rejected Plato's central doctrine. Plato himself mentions in the *Philebus* that the incompatibility of the ideas with the method of diaeresis has cast doubt upon the existence of the ideas as perfect and separate individual entities.³⁵⁰ Now Aristotle twice refers to difficulties in the theory of ideas that led Speusippus to reject them and to posit instead the separate existence of mathematical: In *Metaphysics* 1090 A 8 (= F 36) he mentions "the inherent difficulties concerning the ideas," while in 1086 A 3-4 (= F 35) he speaks of "the difficulty and fictitiousness of the ideas." The latter passage comes immediately after a lengthy series of objections against the derivational aspect of Speusippus' separately existing mathematical numbers and magnitudes.³⁵¹ Before he begins this criticism of Speusippus' doctrine, however, Aristotle attempts to use against the supreme principle of the Platonists, i.e. the One, an argument which was originally an argument against the separate existence of the ideas. He states the argument in stenographic fashion as if it was a well known objection: the difficulty is the relation of the specific animal to the generic idea of living being when the universals are hypostatized.³⁵² This very argument is given at length in two other places: *Metaphysics* 1039 A 24-B 19 and *Topics* 143 B 11-32. In the former passage Aristotle tries to show that the separate

³⁴⁶ Cf. notes 69 and 111 *supra*.

³⁴⁷ Cf. the references given in note 69 *supra* with the corresponding remarks in the text.

³⁴⁸ Cf. *Sophist* 231 C-232 A.

³⁴⁹ Cf. Cherniss, *Riddle*, pp. 39-41.

³⁵⁰ Cf. *Philebus* 15 A-C, esp. 15 A 6-7 with B 1-4.

³⁵¹ Cf. F 40 and F 51 with introductory note to F 40.

³⁵² Cf. *Metaphysics* 1085 A 23-31 with Cherniss, *Riddle*, p. 95, n. 51, who points out that τὸ ζῷον in 1085 A 26 must be the *specific*, not the particular animal.

existence of the ideas is incompatible with his doctrine of the species as the unity of the genus and the differentiae;³⁵³ in the latter, that the ideas are incompatible with his theory of diaeresis and definition. Now Speusippus' own conception of diaeresis and of the unity of substance and definition is incompatible with Aristotle's doctrines of genus and species, of diaeresis, and of the unity of substance and definition. But the two have this in common: that for both of them the diaeretical schema and the relation of more general to less general classes reflect objective ontological relations. Hence, for Speusippus, too, the separate existence of the generic idea of animal, for example, is incompatible with the fact that the classes "man" and "horse," which are nothing but foci of relations, are both related to "animality."³⁵⁴ Aristotle refers to this argument as a stock objection to the theory of ideas and does so in close connection with the "difficulty and fictitiousness" of the ideas according to Speusippus. Plato himself mentions the existence of objections to the ideas because of the alleged incompatibility of their separate existence as perfect individuals with the method of diaeresis. It is therefore quite probable that Speusippus himself raised against Plato's theory the very objection Aristotle mentions. In fact, he may even have been the originator of this objection.

c) *Word, Concept, Argument*

According to Simplicius' report, which through Porphyry ultimately goes back to the Peripatetic philosopher Boethus of Sidon, Speusippus put forward the following exhaustive classification of words.³⁵⁵ The main division is into identical or different words. If identical words have different and unrelated meanings they are *homonyma*; if they have the same meaning they are *synonyma*. As for different words, if they have different and unrelated mean-

³⁵³ Briefly stated the objection is that the generic idea cannot exist apart from the specific ideas which are divisions of it. For, if it did, either different specific ideas would be one and the same and the single generic idea would have contrary attributes and would exist apart from itself, or, if the generic idea is different in each specific idea, it will not be unique, which as an idea it must be.

³⁵⁴ Of course Speusippus had also other reasons to deny the separate existence of ideas, and his doctrine of the separately existing numbers as the only direct objects of knowledge implies the rejection of the hypostatization of any and all universals (cf. pp. 20-23 *supra*).

³⁵⁵ On what follows cf. F 68a-c with comm. *ad loc.*

ings, they are "individually or peculiarly different" (ἰδίως ἐτερόνυμα); if they have the same meaning, they are called *polyonyma*. But different words can be related to one another by similarity of form and meaning, in which case we have the *paronyma*. In this classification, then, we can see how Speusippus classifies by means of the notions of identity, difference, and similarity. The division is made dichotomic by the application of the principle ³⁵⁶ of whether two or more things are identical or different; and the notion of similarity is operative within one of the divisions. Though we are not told in which work of his this exhaustive division of words occurred, the likelihood is that it was part of Speusippus' classification of the whole of existence.

It is clear that the *fundamentum divisionis* of Speusippus' classification of words is the relation of word to concept or meaning. Such a classification has obvious application to the investigation of ambiguity, since it makes it possible to determine by exhaustion in which sense a word or expression has been used; one can thereby force one's adversary to argue to the thing signified and not to the word. There is evidence that Speusippus put his classification of words to such use, and that in this respect he exercised some influence upon Aristotle himself. Before discussing these questions, however, it is well to point out that dichotomic division and the relation of word to concept or meaning are also seen to have been operative in Speusippus' classification of arguments. For it appears from Aristotle's *Soph. Elench.* 170 B 12-171 B 2 (= F 69a) and 177 B 7-9 (= F 69b) ³⁵⁷ that Speusippus divided all arguments into those addressed to the word and those addressed to the thought, and that in connection with the former kind of arguments he maintained that all sophistical refutations are based upon ambiguity (παρὰ τὸ διττόν). Moreover, in his dialogue *Mandrobulus* Speusippus had the character Cleophon avoid being refuted by the respondent by making distinctions (τὸ διττόν) and thereby indicating in which sense a given question should be taken.³⁵⁸ It seems, then, that Speusippus investigated ambiguity as a means of avoiding and refuting fallacies, since for him all fallacies are due to equivocation.

³⁵⁶ Here principle is used in the sense of basic criterion, not in the Speusippean sense in which the One or the point are principles.

³⁵⁷ On what follows cf. comm. on F 69a-b.

³⁵⁸ F 5a with comm. *ad loc.*

Aristotle rejects Speusippus' exhaustive classification of arguments and denies also that all sophistical refutations are based upon ambiguity. His main objections are: (a) There is no peculiar class of arguments addressed to the thought independent of those addressed to the word. (b) There is a distinct class of arguments addressed to the word; but not all refutations, nor all fallacious confutations, are addressed to the word. (c) Not all fallacies of diction (παρὰ τὴν λέξιν) are addressed to the word. (d) Not all fallacious confutations depend upon diction. Despite the paucity of our information about Speusippus, however, it seems that some of Aristotle's arguments are merely verbal while others are not cogent, and that a reasonable case can be made for Speusippus' classification. Thus, concerning objections (b) and (c) Speusippus could argue that by fallacies addressed to the word (πρὸς τοῦνομα) he means all the fallacies which in Aristotle's view depend upon diction (παρὰ τὴν λέξιν) and that there is no reason to think, *pace* Aristotle, that the fallacies of composition and of division are anything but special cases of ambiguity. In this connection, it is noteworthy that Aristotle, in *Soph. Elench.* 177 A 33 - B 7 (i.e. in the passage immediately preceding F 69b), felt it necessary to argue that these two kinds of fallacies do not depend upon ambiguity or double meaning (παρὰ τὸ διττόν). This is surely an indication that the person who reduced all sophistical refutations to ambiguity (i.e. Speusippus) did think that the fallacies of division and composition depend upon ambiguity and are, therefore, addressed to the word or to diction, i.e. to the verbal expression, and not to the thought. In short, then, the probability is that the six kinds of fallacies which, according to Aristotle, are fallacies of diction—ambiguity, amphibology, composition, division, wrong accent, and the form of the expression used—were (or would have been) considered by Speusippus to be due to ambiguity and to be addressed to the word. Ultimately, the difference between Aristotle and Speusippus here seems to be merely verbal. According to Aristotle there are seven kinds of fallacies independent of diction. These are: (i) accident, (ii) the use of words with or without qualification, (iii) *ignoratio elenchi*, (iv) *petitio principii*, (v) the consequent, (vi) false cause, (vii) to reduce several questions to one. It is not necessary here to discuss Aristotle's doctrine that all these fallacies can be reduced to *ignoratio elenchi* and that they all arise as a result of confusion and failure to draw proper distinctions.

It suffices to point out that for Speusippus some of these would be fallacies addressed to the word or language, e.g. (i), (ii), (vii), whereas others, e.g. (iii) and (iv), would be addressed to the thought. This would take care of objection (d) above. There is some evidence to support such an interpretation. For in *Soph. Elench.* 179 B 38 Aristotle states that there are people who try to solve the fallacies of accident by the determination of ambiguity (τῷ διττῷ); and from 182 B 6-31, esp. lines 22-27, it appears that some thought that fallacies depending on the use of words with or without qualification are also due to ambiguity. Finally, Aristotle's rejection of a class of arguments addressed to the thought independently of the form of expression (= *a* above) is either merely verbal or at the very least inconsistent with his own classification of fallacies. For Aristotle himself admits that some fallacies depend upon diction while others are independent of it. Therefore, it is hardly cogent for him to deny that, among the latter kind of fallacies, some (e.g. *ignoratio elenchi*) are not dependent upon diction, except in so far as any thought must be expressed in words. But the fallacy itself does not depend upon ambiguity of language.

It ought to be clear, then, that Speusippus' classification of arguments is not so different from Aristotle's own as the latter would have us believe, and that he must have exercised some influence upon Aristotle in this matter, despite Aristotle's flat assertion towards the end of the *Sophistici Elenchi* that on the subject of reasoning (περὶ τοῦ συλλογίζεσθαι), unlike that of rhetoric, he had no predecessors.³⁵⁹ Since this assertion refers both to the *Sophistici Elenchi* and to the *Topics*, it is necessary to point out that there is evidence that Speusippus exercised some influence upon Aristotle also in the latter work. Nowhere in his extant writings does Aristotle mention Speusippus' exhaustive classification of words. Yet in chapter fifteen of the first book of the *Topics* he himself unwittingly testifies both to the use Speusippus made of his classification of words in the investigation of ambiguity and of the influence he had on Aristotle himself.³⁶⁰ For it is remarkable that, when in *Topics* I. 15 Aristotle himself investigates the ambiguity of the terms used in propositions or sentences and offers

³⁵⁹ Cf. *Soph. Elench.* 183 B 15-184 B 8, esp. 183 B 34-36 and 184 A 8-B 3.

³⁶⁰ On this and on what follows cf. the longer discussion in Tarán, *Homonymy*, pp. 91-99.

practical rules for the determination of such ambiguity, he twice uses *synonymon* in the Speusippean sense, that is, that a word is used synonymously if it refers to a single undifferentiated concept.³⁶¹ What is noteworthy is that such a use of *synonymon* is at variance not only with Aristotle's definition of *synonyma* in *Categories* I A 6-7 (where *synonyma* refers to things and not to words) but also with his implicit definition of synonymy in the *Rhetoric* (I404 B 37 - I045 A 2), according to which different words are *synonyma* if they have the same meaning (i.e. what Speusippus calls *polyonyma*). This alone would suggest, as Hambruch saw,³⁶² that this chapter of the *Topics* stands in some sort of relation to one or more works of Speusippus. The interpretation is further corroborated by the recurrence, in this same chapter of the *Topics*, of the Speusippean "topic" of the relation of word to concept,³⁶³ which, as we saw, was the very *fundamentum divisionis* of Speusippus' classification of words and also of arguments. There is, moreover, additional evidence of the presence of Speusippean doctrines in the first book of the *Topics*: the importance of the principle of whether two things are the same or different in the establishment or overthrow of definitions and in the discovery of ambiguity;³⁶⁴ the importance attached to the discovery of differentiae in chapter 16; and, finally, in chapter 18, the discussion of the investigation of similarity with a view to induction, hypothetical arguments, and the establishment of definitions. Moreover, in connection with the last mentioned topic, Aristotle clearly, though without naming him, refers to Speusippus as a "definition monger" and also to his peculiar use of similarity to render definitions of generically different things such as monad and point.³⁶⁵

The fundamental importance of similarity in Speusippus' ontology and in his theory of knowledge itself suggests that he must have made extensive use of the argument from analogy in establishing his doctrines; and even the meager remains of his work that have

³⁶¹ *Topics* 107 B 4 and 17. Cf. also *De Part. Animal.* 643 B 3-8 = F 67 with comm. *ad loc.*

³⁶² Hambruch, *Logische Regeln der Platonischen Schule in der Aristotelischen Topik*, pp. 28-29. Hambruch, Lang, and others, however, failed to see the importance of the passage of the *Rhetoric* cited above (cf. Tarán, *Homonymy*, p. 95 and n. 66).

³⁶³ *Topics* 107 A 3-4, A 20, B 21-23, B 27-29, B 33-34.

³⁶⁴ Cf. F 64 with comm. *ad loc.* and *Topics* I. 15 and 108 A 18-33.

³⁶⁵ Cf. F 65 with comm. *ad loc.*

come down to us support this interpretation.³⁶⁶ We also know that he made use of the argument from the contrary, but discussion of this topic must be postponed to the next chapter. There is also some slight evidence of his interest in etymology (F 85), but we cannot be sure that his etymology of "Apollo" was meant to be taken seriously, since it is similar to those of Plato's *Cratylus* which were certainly offered as a parody of the procedure of contemporary etymologists.³⁶⁷

³⁶⁶ Cf. F 28, line 9 with comm. *ad loc.* and the references given there and pp. 58-62 *supra*.

³⁶⁷ Cf. comm. on F 85.

CHAPTER FOUR

ETHICS

Reference has already been made to Speusippus' notion that the appearance of the good requires a process of natural development, a doctrine which implies that goodness appears only among living beings, that is to say at the level of the soul and the sensibles.³⁶⁸ Speusippus seems to have thought that there is goodness and purpose in the cosmos as a whole, in plants and animals as whole organisms, and also that there is an ethical good.³⁶⁹ Since he did not hypostatize concepts, it is appropriate to ask whether he conceived the several goods to be related to one another or not. He clearly connected goodness with *nature*³⁷⁰ and thought that the highest ethical good, i.e. happiness, is a perfect condition in *natural* states and activities.³⁷¹ It is therefore more likely than not that for him goodness is not a purely homonymous term but that the several goods are analogically related to one another.³⁷² This conception would be in accordance with the importance of similarity and analogy in his system and comes close to Aristotle's own doctrine.³⁷³ It is therefore probably significant that in *Eth. Nic.* 1096 B 5-7 (= F 47a) Aristotle himself refers with approval to the Pythagoreans and Speusippus immediately after his arguments against the Platonic doctrine of a single good, namely the idea of good.

In the realm of ethics itself Speusippus' doctrine exhibits similarities to, and differences from, those of Plato and Aristotle. Like Plato and Aristotle he thought that happiness is the highest good and that it coincides with wisdom; ³⁷⁴ like them he, too, considered that the possession of other things such as health and wealth, which are not by themselves good, is not indifferent to the wise man; ³⁷⁵

³⁶⁸ Cf. pp. 41-44 and 51-52 *supra*. Cf. also note 466 *infra*.

³⁶⁹ Cf. F 28, lines 10-14, F 56a-b, F 57, F 58; F 42a, F 43, F 44; F 77-F 84.

³⁷⁰ Cf. esp. F 42a and F 44 with comm. *ad locc.*

³⁷¹ Cf. F 77 with comm. *ad loc.*

³⁷² That is to say that for Speusippus "goodness" is related to the conformity of whole organisms to natural states.

³⁷³ Cf. F 47a with introductory note and comm. *ad loc.*

³⁷⁴ Cf. F 77-79 with comm. *ad locc.*

³⁷⁵ Cf. F 78a-d and F 79.

and also like them he conceived the good or virtue to be a middle between two extreme evils.³⁷⁶ It is in connection with this last mentioned doctrine, however, that his main differences with Plato and Aristotle appear. For, whereas Speusippus considered the good to be a middle between the two extreme evils of pleasure and pain,³⁷⁷ neither Plato nor Aristotle subscribed to the notion that pleasure as such is evil.³⁷⁸

Because of his extreme anti-hedonism, several scholars have ascribed to Speusippus the doctrine espoused by Philebus' enemies in Plato's homonymous dialogue (44 B-D), according to which pleasure is merely the cessation of pain.³⁷⁹ This conception of pleasure as something purely negative can hardly have been part of Speusippus' doctrine, however, since for him the neutral state between pleasure and pain coincides with the good.³⁸⁰ This neutral state he must have identified with the freedom from disturbance (ἀσκλησία) which for him is the necessary condition of virtue and happiness.³⁸¹ Hence, according to Speusippus the virtuous man must free himself both from pain and pleasure; and,

³⁷⁶ Cf. F 80a-F 81b, F 83-84 with comm. *ad locc.*; Plato, *Republic* 619 A, *Laws* 679 B-C, 701 E, 719 D-E, 728 D-E, 792 C-D, 793 A, and the implications of *Politicus* 283 B-284 B for Plato's ethical doctrine; Aristotle, *Eth. Nic.* 1106 B 5 ff., 36 ff., and especially 1109 A 20-B 26 with comm. on F 83 and note 269 there.

³⁷⁷ Cf. F 80a-F 81b with comm. *ad loc.*, F 84.

³⁷⁸ Cf. Plato's *Philebus* and Aristotle, *Eth. Nic.* 1152 B 1-1154 B 31 and 1172 A 19-1176 A 29.

³⁷⁹ Cf. e.g. A. Döring, "Eudoxos von Knidos, Speusippos, und der Dialog *Philebos*," *Vierteljahrsschrift für wiss. Philos. und Soziol.* 27 (1903), pp. 113-129, esp. 125-127 = A. Döring, *Gesch. d. griech. Philos.*, II (Leipzig, 1903), pp. 5-21, esp. 18-20; Wilamowitz, *Platon*, II, pp. 272-273; Philippson, *Hermes* 60 (1925), pp. 452-453 and 470-474; Burnet, *Greek Philosophy*, p. 324 f.; Taylor, *Plato*⁴, pp. 409-410, 423 with n. 1, 434-435; *A Commentary on Plato's Timaeus*, pp. 455-456; Friedländer, *Plato*, III, pp. 339 and 540, n. 61; Gauthier et Jolif, *L'Éthique à Nicomaque*³, II, 2, pp. 777, 788, 801; Düring, *Aristoteles*, p. 457, n. 157; Krämer, *Platonismus*, esp. pp. 205-209 with n. 88; Schofield, *MH* 28 (1971), pp. 2-20 and 181. For our purposes here it makes no difference that some scholars think Plato has Speusippus specifically in mind, others that he refers to Speusippus *et alii*, still others that Speusippus held the doctrine of pleasure as the cessation of pain but that Plato may not have meant to refer to him at all (cf. notes 382 and 384 *infra*).

³⁸⁰ Cf. esp. F 81a with comm. on F 80a-81b.

³⁸¹ Cf. F 77 with comm. *ad loc.*

if pleasure were nothing but the cessation of pain, he would not have considered it to be an evil, nor would he have thought that the virtuous man must avoid it as such.³⁸²

³⁸² Diès, *Philèbe*, pp. LVII-LXII rejects the identification of the *δυσχερεῖς* of the *Philebus* with Speusippus; he does so, however, on the ground that the picture of Speusippus' character which emerges from the biographical tradition is not in agreement with Plato's characterization of the enemies of *Philebus* in 44 B-D, and without denying that Speusippus held the doctrine in question. (On the unreliability of the biographical notices about Speusippus cf. pp. 3 ff. *supra* and the commentary to the *Testimonia passim*.) The testimony of Aristotle together with that of Clement (F 80a, F 81a, F 77; cf. also F 84) make it certain that for Speusippus the neutral state between the two extreme evils of pleasure and pain is to be identified with the good. From this it follows that he could not have conceived pleasure as something purely negative and that his doctrine is incompatible with that of *Philebus* 44 B-D, because the *δυσχερεῖς* postulate only two states, pain and release from it, not three. (This last point was seen by Hackforth, *Plato's Exam. of Pleasure*, p. 87.) The different attempts of Döring, Philippson, Krämer, and Schofield (cf. note 379 *supra*) to avoid the implications of the preceding arguments are nothing but special pleading. For, even if Speusippus had first argued against Aristippus' extreme hedonistic doctrine that the wise man needs *ἀσχησία* (cf. note 384 *infra*), there would be no reason to think that in his later attack on Eudoxus he became a more extreme anti-hedonist or that he modified his doctrine in any substantial way. In fact, there is no evidence and no reason to suppose that Speusippus' *Aristippus* (cf. note 383 *infra*) is earlier than his treatise *Περὶ ἡδονῆς α'* (T 1, line 38) where he probably attacked Eudoxus (cf. comm. on F 80a-81b with note 264 there); the contents of F 77 are of a piece with those of F 80a and F 81a; and Aristotle does not say or imply that Speusippus' views on pleasure underwent any development. Moreover, all these interpreters, Krämer and Schofield included, continue to misinterpret the phrase *μάλα δεινοὶ λεγόμενοι τὰ περὶ φύσιν* (*Philebus* 44 B 9) which does not mean "réputés pour très habiles dans la connaissance de la nature" (Diès, and similarly most translators), but "reputed to be very clever about their own nature" (cf. Cherniss, *AJP* 68 [1947], p. 227 = *Selected Papers*, p. 178), and so refers to the same people's *δυσχερεῖα φύσεως* in 44 C 6. In short, Plato's point is that these people's denial of the reality of pleasures is in accordance with, or comes from, their own "revulsion" or "fastidious nature." Hence, these people need not be philosophers at all, and Plato calls them *οὐκ ἀγεννοὺς* not, as Schofield thinks, because their revulsion against hedonism was accompanied by argument but, as the context indicates (44 D 1-5), because they are right up to a point in being revolted by pleasure, since only some pleasures are true. Furthermore, even if *δυσχερής* is a typical Speusippean word, as Schofield argues (cf. F 35, F 36, F 44, F 45a), he would have used it in a different sense from that in which the word is used in the *Philebus*; and, even apart from this, it is surely arbitrary to think that Speusippus was so well-known for his use of the word that Plato could simply refer to him by means of it. Finally, Schofield misinterprets Aristotle's testimony about Speusippus in F 80a and F 81a (cf. *ad loc.*) in order to leave open the possibility that *Philebus* 44 B-D refers to Speusippus, and then proceeds to make use of the *Philebus* in order to "clarify" what Aristotle says.

It is a reasonable conjecture that in his *Aristippus*³⁸³ Speusippus attacked the extreme hedonistic doctrine of that philosopher. But, as we have no information at all concerning the contents of that dialogue, it is best not to attempt to reconstruct it.³⁸⁴ We know instead that in establishing his doctrine of the good as a middle between the two extreme evils of pleasure and pain Speusippus attacked Eudoxus' identification of pleasure with the highest

If *Philebus* 44 B-D does not refer to Speusippus, it ought to be obvious that he cannot be included among the *χομψοί* who define pleasure as *γένεσις*. And Diès, *op. cit.*, LXII-LXX has shown that there are overwhelming reasons why those referred to in 53 C cannot be the same as the *δυσχερεῖς* of 44 B-D, as Taylor, *A Commentary on Plato's Timaeus*, pp. 460-462 and others think they are. Yet Gauthier et Jolif, *op. cit.* (note 379), p. 788 and Krämer, *Platonismus*, esp. p. 206, n. 88 brush aside Diès' arguments without offering any real justification for doing so (cf. also Cherniss, *AJP* 68 [1947], pp. 232-233 = *Selected Papers*, pp. 183-184). These arguments are: (a) the very wording of 54 C 4-7 shows that those who give as a new formula of pleasure that it is *γένεσις* and never *οὐσία* are hedonists; (b) that it is only because Aristotle in criticizing the anti-hedonists attacks as one of their arguments the definition of pleasure as *γένεσις* that scholars have identified the *χομψοί* of 53 C with the *δυσχερεῖς* of 44 B-D. But, as Diès points out, it is intelligible that Aristotle should have done so, since Socrates in the *Philebus* adopts this definition and proceeds to use it in his refutation of the hedonistic thesis.

There is no need to ascribe to Speusippus the doctrine that pleasure is not a good because it is not a quality (Aristotle, *Eth. Nic.* 1173 A 13-15 = F 81a). This doctrine may belong to another thinker or may be simply an inference of Aristotle's from the passages that precede and follow 1173 A 13-15, which do refer to Speusippus. (N.b. that in 1173 A 15-28 = F 81a Aristotle refutes Speusippus' argument that pleasure as "indefinite" cannot be good and that he uses the argument that also the virtues admit of degrees, as health does.) Nor should one ascribe to Speusippus the doctrine Aristotle attacks in *Eth. Nic.* 1104 B 24 ff., according to which the virtues are *ἀπάθειαι καὶ ἡρεμῖαι*, as some scholars have proposed (cf. Krämer, *Platonismus*, p. 205 and n. 87 with references), since Speusippus' conception of freedom from disturbance (F 77 and F 80a, F 81a) does not necessarily imply that the virtues are *ἀπάθειαι καὶ ἡρεμῖαι*. Moreover, Speusippus' notion that things such as wealth and health, which are not absolute goods, are not indifferent to the wise and happy man (cf. F 77, F 78a-d and F 79, with comm. *ad locc.*) is hardly compatible with the doctrine rejected by Aristotle in *Eth. Nic.* 1104 B 24 ff. For other Aristotelian passages which without good reasons have been taken to refer to Speusippus cf. Isnardi Parente, pp. 927-928.

³⁸³ Cf. T 1, lines 36 and 50 with comm. on T 1, 36 and comm. on F 80a-F 81b with note 264 there.

³⁸⁴ Such a reconstruction has been attempted by Philippson, *op. cit.* (note 379 *supra*), pp. 455-460 and 473. Cf. *contra* note 382 *supra*. (In any case, the occurrence of *ἀνοχλησία* in Diogenes Laertius II, 87 is irrelevant, since it is used in connection with Epicurus, not Speusippus.)

good.³⁸⁵ One of the arguments Eudoxus advanced in support of his doctrine was that "from the contrary" (ἐκ τοῦ ἐναντίου); and this same argument was used by Speusippus in refuting him and by Aristotle in rejecting Speusippus' doctrine that pleasure as such is an evil. Speusippus contended that, from the fact that pain and pleasure are opposites and that pain as such is to be avoided as an evil, it does not follow that pleasure is the good or even good. For pleasure is opposed to pain and both as evils to the good, just as the greater is opposed to the less and both to the equal. Speusippus, then, equated or associated the good with the equal, and pleasure and pain as evils with the greater and the less. Consequently, he thought that the good is indivisible and definite, whereas pleasure and pain as evils are indefinite and divisible.³⁸⁶

Aristotle, for his part, does not subscribe to Eudoxus' doctrine that pleasure is the good, but nevertheless believes that it is a good and that Eudoxus' argument from the contrary proves just that.³⁸⁷ He therefore maintains that Speusippus' use of the argument from the contrary, though in itself valid, is not applicable to pleasure and pain, because pleasure is the contrary of pain as absolutely bad *per se*. It is pain as such that is avoided, and men pursue its contrary, pleasure, as a good.³⁸⁸ An indication that Aristotle's argument is far from compelling is his statement that Speusippus "would not say that pleasure is essentially some kind of evil."³⁸⁹ For only on this supposition would his argument be cogent. However, that pleasure as such is an evil is in fact what Speusippus *did* say even according to Aristotle himself.³⁹⁰ Nor would he have admitted the validity of Aristotle's argument that, if both pain and pleasure were evils, both would be equally avoided, whereas if both were neutrals neither should be avoided or both should be equally avoided. But in fact men avoid pain as an evil and choose pleasure as a good. This is not a cogent objection to Speusippus'

³⁸⁵ Cf. F 80a and F 81a with comm. on F 80a-F 81b.

³⁸⁶ Cf. F 81a and F 82 with notes *ad locc.*

³⁸⁷ Cf. *Eth. Nic.* 1172 B 18-20 with 1173 A 5-13 (= F 81a) and 1153 B 1-7 (= F 80a).

³⁸⁸ *Eth. Nic.* 1173 A 5-13 = F 81a.

³⁸⁹ *Eth. Nic.* 1153 B 6-7 = F 80a. For the implications of Aristotle's statement here, which have been misunderstood by Schofield (cf. note 379 *supra*), cf. the remarks in the text which follow this note, note 246 *supra*, and comm. on F 80a-F 81b *infra*.

³⁹⁰ Cf. F 81a with comm. on F 80a-81b.

doctrine, since he most probably held that pleasure, like pain, is a disturbance incompatible with the state of *ἀοχλησία* which is the necessary condition of happiness and virtue.³⁹¹ That all men desire to be happy Speusippus knew.³⁹² And he must have been aware of the fact that most men choose pleasure as a good; after all Eudoxus had made it one of the basic premises of his doctrine that pleasure is the good, that all living beings, rational and irrational, pursue pleasure.³⁹³ But Speusippus held that only the good and virtuous, i.e. the few, aim at achieving freedom from disturbance.³⁹⁴ And the fact that most men avoid pain as an evil and that they wrongly think, as Aristotle himself admits, that the pleasures they choose are good is not a reason to believe that pleasure as such is good. Nor is there much cogency in Aristotle's arguments against Speusippus' doctrine that the good is determinate whereas pleasure is indeterminate.³⁹⁵ In this connection it is necessary to bear in mind that Speusippus in all probability did not say that pleasure is an evil *because* it is indeterminate. Rather, he probably thought that pleasure as such is an evil because it is a disturbance; and he then tried to find distinguishing marks or attributes of pleasure in order to differentiate it from the good. But, against Aristotle's argument from the feeling of pleasure,³⁹⁶ Speusippus could cogently argue from his point of view that the good is determinate and indivisible and does not admit of degrees as health (Aristotle's analogy) does. And so, since pleasure is indefinite, it must be different from the good; hence it is an evil, since it is contrary to pain and like pain it must be also contrary to the good. Nor need he have admitted the validity of the distinction between unmixed and mixed pleasures, which Aristotle himself gives as the basis of his refutation of Speusippus' view of pleasure as indefinite and evil.³⁹⁷

In *Anal. Post.* 92 A 20-27 (= F 82) Aristotle rejects Speusippus'

³⁹¹ Cf. F 77 with comm. *ad loc.* and the implications of F 81a itself (cf. F 80d).

³⁹² F 77 ἥς δὴ καταστάσεως (sc. εὐδαιμονίας) ἅπαντας μὲν ἀνθρώπους ὁρεξίν ἔχειν.

³⁹³ Cf. Aristotle, *Eth. Nic.* 1172 B 9-15.

³⁹⁴ Cf. F 77, immediately after the sentence quoted in note 392 *supra*, στοχάζεσθαι δὲ τοὺς ἀγαθοὺς τῆς ἀοχλησίας.

³⁹⁵ Cf. comm. on F 80a-81b.

³⁹⁶ *Eth. Nic.* 1173 A 17-22 and 23-28 = F 81a.

³⁹⁷ *Eth. Nic.* 1173 A 22-23.

alleged attempt to demonstrate the definition of good as indivisible by assuming that of evil as divisible; for such a demonstration begs the middle term in as much as good and evil are correlative.³⁹⁸ It is a question, however, whether Speusippus was trying to demonstrate the definition of good as indivisible. For one thing, it is noteworthy that in criticizing the doctrines of his adversaries Aristotle makes no allowance for the possibility that they might have tried to establish, and not at all to demonstrate, their definitions.³⁹⁹ Moreover, in *Topics* 153 A 26 - B 24 Aristotle himself refers to the usefulness of the argument from the contrary in the establishment of definitions. Furthermore, it is hardly likely that Speusippus meant literally to identify the good with the indivisible, since, on the one hand, he held that there is no goodness in numbers while, on the other hand, he associated indivisibility with equality, and equality with the number one.⁴⁰⁰ The probability is that he was merely trying to establish indivisibility as one of the distinguishing marks of the good; and there is some evidence, as we just saw, that this was useful to him in his argument that pleasure is not a good because it is something indefinite and divisible. Since he held that pleasure and pain, which admit of degrees, are evils because they are disturbances, it follows that evil is indefinite and divisible; and the good, since it is the contrary of evil, must have as a predicate the contrary of divisibility, i.e. must be indivisible. This establishes the definition in accordance with Aristotle's own rules in *Topics* 153 A 26 - B 24, and there is no reason to believe Speusippus thought that by such use of the argument from the contrary he was actually demonstrating that the good is indivisible. Aristotle himself in *Topics* 108 B 19-31 (= 65) testifies to Speusippus' interest in the establishment of definitions.

Speusippus' treatment of divisible (*διαίρετόν*) as a term equivalent to indefinite (*ἀόριστον*),⁴⁰¹ which was also a term he applied to the imperfect (*ἀτελής*),⁴⁰² and his definition of evil as "to be divisible" are evidence of the extension of negative terms in the Academy⁴⁰³ to cover "positive" attributes. From this and from his conception

³⁹⁸ Cf. comm. on F 82 with the reference to *Topics* 147 B 17-25.

³⁹⁹ Cf. Cherniss, I, pp. 27 ff.

⁴⁰⁰ Cf. pp. 53-54 *supra*.

⁴⁰¹ Cf. F 81a with F 82.

⁴⁰² Cf. F 43.

⁴⁰³ Cf. Cherniss, I, n. 176.

of ἀοχλησία, it is clear that for Speusippus pain and pleasure, which as evils are indefinite and divisible, are not merely negative states. Speusippus, then, did not subscribe to the Aristotelian doctrine of evil as purely negative.⁴⁰⁴ a notion which Aristotle extended even to the realm of ethics.⁴⁰⁵

It is in the case of his ethical doctrines that the loss of Speusippus' writings is most regrettable, for a simple glance at the list of his works preserved by Diogenes Laertius shows that he devoted several dialogues and treatises to this subject;⁴⁰⁶ and yet the notices that refer to his ethical doctrines are fewer even than those about his metaphysics and epistemology.

⁴⁰⁴ Cf. F 83 with comm. *ad loc.*

⁴⁰⁵ *Eth. Nic.* 1177 B 26-31 with *Metaphysics* 1021 B 20-28, 1055 B 18-20, *Physics* 199 A 30-B 4, 246 A 13-17, 247 A 2-3, *De Anima* 430 B 20-23.

⁴⁰⁶ Cf. T 1, lines 36, 37, 38, 39, 41, and several other titles may refer to ethical works as well, e.g. those in lines 44-47 and 60.

CHAPTER FIVE

SPEUSIPPUS, ARISTOTLE, AND IAMBlichUS

In his *From Platonism to Neoplatonism*, first published in 1954, Merlan singled out a passage of Iamblichus' *De Communi Mathematica Scientia* as a fragment of Speusippus, and in the second edition of this work he defended his interpretation against the objections raised by some scholars.⁴⁰⁷ He argues that within chapter IV of Iamblichus' work the section dealing with the principles of mathematical numbers and magnitudes (*De Communi Mathematica Scientia* IV, pp. 15, 6-18, 12; hereafter = *DCMS* IV) is so essentially at variance with Iamblichus' doctrine and style that it cannot be his work at all. Merlan believes that only the introduction to the passage in question (i.e. pp. 14, 18-15, 5) and what he considers to be its concluding summary (p. 18, 13-23) are by Iamblichus, that the rest of chapter IV comes directly or indirectly from Speusippus, and that, even if the latter is the case, there is no essential misrepresentation of Speusippus' thought.⁴⁰⁸ The reasons for the ascription to Speusippus are two: (a) *DCMS* IV is so similar to what Aristotle describes as typical of Speusippus that the passage must refer to the latter's doctrine; (b) *DCMS* IV is sufficiently different from Aristotle's testimony to justify the inference that it does not come from him. Merlan's theory about the ultimately Speusippean origin of *DCMS* IV has been accepted by many critics who, like him, make use of this text in their reconstructions of Speusippus' doctrine.⁴⁰⁹ To be sure, they

⁴⁰⁷ My references to Merlan are always to *From Platonism*². Apart from one change in wording, pp. 98-128 are essentially identical to the first edition, whereas in an appendix, pp. 128-140, he has tried to answer the criticisms of other scholars. Part of Merlan's discussion in this chapter of his book has to do with his interpretation of Plotinus, a subject which is unrelated to the points at issue here, and which I have therefore ignored. Against his notion that F 48 confirms his interpretation of Speusippus' One as "above being" cf. comm. *ad loc.*

⁴⁰⁸ Cf. Merlan, *From Platonism*², esp. pp. 100-102, 120, 129-132.

⁴⁰⁹ Among the numerous scholars who follow Merlan one may mention Kohnke, *Gnomon* 27 (1955), pp. 160-161 (who thinks that Iamblichus got *DCMS* IV from Posidonius); Dörrie, *Philos. Rund.* 3 (1955), pp. 15-16 = *Platonica Minora*, pp. 276 f.; Krämer, *Ursprung*, esp. pp. 208-214 (and in several other places of this work as well as in other publications of his);

sometimes disagree with him and also with one another concerning the interpretation of *DCMS* IV itself, the meaning of Speusippus' doctrine as reconstructed from this passage, the relation of it to the Aristotelian evidence, and other kindred matters; but they nevertheless accept Merlan's contention that *DCMS* IV is primary evidence for the reconstruction of Speusippus' philosophy.

Some critics have expressed doubts concerning the attribution of *DCMS* IV to Speusippus.⁴¹⁰ Two in particular, W. G. Rabinowitz and M. Isnardi Parente, have, from different points of view, rejected Merlan's theory and at the same time advanced detailed interpretations of the Iamblichean text and its relation to Speusippus' thought.⁴¹¹ Rabinowitz, while agreeing with Merlan that *DCMS* IV exhibits some similarities to Speusippus' doctrine as reported by Aristotle, nevertheless contends that this passage is in several places essentially at variance with the Aristotelian testimony. He argues that the author of *DCMS* IV has in fact modified Speusippus' thought in order to avoid Aristotle's criticisms of Speusippus in *Metaphysics* 1085 A 32 - B 4 and B 12-34 (= F 40 + F 51) and that the result of this modification is a doctrine which cannot be that of Speusippus. Isnardi Parente, for her part, maintains that in *DCMS* IV Speusippus' doctrine has been modified in the light of Neopythagorean tenets, that Iamblichus' source has failed to understand some essential Speusippean notions, and that even the terminology employed betrays this fact. In short, according to these two scholars *DCMS* IV cannot be used as a source for the reconstruction of Speusippus' thought.

Happ, *Hyle*, esp. pp. 208-241 and *passim*; Schofield, *MH* 28 (1971), p. 14; H. A. S. Tarrant, *Phronesis* 19 (1974), pp. 130-145; Kullmann, *Wissenschaft und Methode*, pp. 147 with nn. 37-38 and 150 with nn. 47-48; Guthrie, *History*, V, pp. 460 with nn. 3-5 and 462 with nn. 1-2. Some of these publications will be referred to in connection with the interpretation of individual passages.

⁴¹⁰ E.g. Armstrong, *Mind* 64 (1955), pp. 273-274; Moreau, *Rev. Belge de Philol. et d'Hist.* 34 (1956), pp. 1164-1167; Loenen, *Mnemosyne* N.S. IV, 10 (1957), pp. 80-82.

⁴¹¹ Rabinowitz, *Aristotle's Protrepticus*, I, pp. 85-92 and in an unpublished mimeographed paper "Numbers and Magnitudes: An Iamblichean Derivation Theory and Its Relation to Speusippean and Aristotelian Doctrine," delivered to the Society for Ancient Greek Philosophy meeting in Washington, D.C. on December 29, 1957. (In a letter to Merlan [cf. *From Platonism*³, p. 129, second note] Rabinowitz informed him that he had independently discovered the Speusippean character of *DCMS* IV.) Isnardi Parente, "Proodos in Speusippo?" *Athenaeum*, N.S. 53 (1975), pp. 88-110 (= *Proodos*).

Though finding myself in agreement with this last conclusion, I nevertheless believe that both Rabinowitz and Isnardi Parente have, in different ways, misinterpreted *DCMS* IV as well as key aspects of Aristotle's testimony about Speusippus; also, that each of them has failed to comment on some parts of the Iamblichean text which are essential for the points at issue between their own diverse interpretations and that of Merlan. On the other hand, while I think that Merlan is closer to being right in his interpretation of *DCMS* IV, it seems to me that he is demonstrably wrong in his use of the Aristotelian evidence and that, because of this, his hypothesis that *DCMS* IV is a primary and independent source of Speusippean doctrine cannot be right.

In order to give plausibility to his theory Merlan has to maintain that *DCMS* IV is not essentially at variance with Aristotle's testimony. According to him the Iamblichean text merely clarifies and makes more precise some of Aristotle's ambiguous remarks about Speusippus. But he has failed to discuss several possibilities, any or all of which may be fatal to his interpretation. Thus, for example, even if we suppose for the sake of the argument that nothing in *DCMS* IV is at variance with Aristotle's testimony about Speusippus, how can we be reasonably sure that those tenets of the Iamblichean text not found in Aristotle are genuine Speusippean doctrine? *In this case* it will not do to argue, as Merlan does, that certain doctrines of *DCMS* IV—e.g. the One and multiplicity as the principles of mathematical number, the plurality of material principles, and the conception of the One as neither good nor beautiful—were held only by Speusippus.⁴¹² For in the six centuries between Aristotle and Iamblichus more than one thinker might have adopted one or more tenets of Speusippus' doctrine as reported by Aristotle and at the same time may have modified it in the light of other doctrines which are incompatible or essentially at variance with it, or which in any case Speusippus did not hold. In fact, we know that a whole literature of Pythagorean pseud-epigraphic writings arose before the time of Iamblichus, that one of its purposes, as shown by such works as those by Ocellus Lucanus, Timaeus Locrus, and "Archytas," was precisely to provide the

⁴¹² This argument is valid only when we evaluate the Aristotelian evidence because Aristotle consistently ascribes these doctrines to Speusippus and to no other philosopher. Cf. esp. on F 37, F 38, 1, F 51, F 42a, F 43, F 44, F 45a, F 46a, F 62 with note 202, etc. and Introduction, p. xxiv f.

public with the alleged pre-Platonic treatises in which Plato, Aristotle, and others found their basic doctrines,⁴¹³ and that by the first century A.D. or earlier Moderatus and others were actually claiming for the early Pythagoreans the main doctrines of Plato, Aristotle, Speusippus, Xenocrates, etc.⁴¹⁴ In this task the Neopythagoreans may even have benefited from the facts that Speusippus and Xenocrates themselves liked to emphasize the Pythagorean origin of some of their doctrines⁴¹⁵ and that Aristotle for his own polemical purposes emphasized the affinity between Platonism and Pythagoreanism.⁴¹⁶ And so Merlan should have taken into account the possibility that *DCMS IV* may be the work of a Neopythagorean sympathizer. When it is seen, as I hope to show, that *DCMS IV* is incompatible with Speusippus' thought and that it contains doctrines typically Neopythagorean and/or Neoplatonic, one must conclude that it is either the work of an unknown author or that it was put together by Iamblichus himself out of one or more sources. Merlan argues that the doctrine of the One found here, though it has similarities to that of the Neoplatonists, is neither Plotinus' nor that of Iamblichus. That it is not Plotinus' doctrine, I fully agree. But it is not necessarily incompatible with Iamblichus' own philosophy, as Merlan believes it is.⁴¹⁷

In the present chapter, I shall first assume and then try to show that *DCMS IV* is a unified account Iamblichus took from an earlier author, and I shall for the most part limit the discussion to the following points: (i) what exactly is the doctrine of *DCMS IV*; (ii) is that doctrine basically in agreement with Aristotle's testimony

⁴¹³ Cf. 'Ocellus Lucanus'. Text und Kommentar von R. Harder (Berlin, 1926); *Timaeus Locrus, De Natura Mundi et Animae*. Überlieferung, Testimonia, Text und Übersetzung von W. Marg (Leiden, 1972) and *Timaios Lokros Über die Natur des Kosmos und der Seele*. Kommentiert von M. Baltes (Leiden, 1972); T. A. Szlezák, *Pseudo-Archytas, Über die Kategorien* (Berlin, 1972); H. Thesleff, *An Introduction to the Pythagorean Writings of the Hellenistic Period* (*Acta Academiae Aboensis, Humaniora* XXIV. 3, 1961) and *The Pythagorean Texts of the Hellenistic Period* (*ibid.* XXX. 1, 1965).

⁴¹⁴ Cf. T 49 with comm. *ad loc.*

⁴¹⁵ On Speusippus' interest in Pythagoreanism cf. esp. comm. to F 28, lines 2-4, 7-8, and 1-62 *sub finem*, F 38, 1, F 42a, F 47a, F 61a-b. On Xenocrates cf. Burkert, *Love and Science*, p. 64-65, though I cannot follow him in his contention that Xenocrates "understood the ideas contained in Plato's dialogue (sc. the *Timaeus*) as the teaching of Pythagoras."

⁴¹⁶ Cf. esp. Cherniss, *Crit. Pres. Philos.*, pp. 386-392; Cherniss, I, pp. 129-132 with n. 83 and pp. 177-198.

⁴¹⁷ Cf. note 456 *infra*.

about Speusippus or not; (iii) is *DCMS* IV compatible with those tenets of Speusippus' doctrine which can with good probability be reconstructed from Aristotle's testimony and from other sources or not. To facilitate reference I transcribe the text of *DCMS* IV. (I have changed Festa's punctuation in one instance [cf. note 439 *infra*], where the interpretation depends on the punctuation.)

- p. 15 6 Τῶν δὴ ἀριθμῶν τῶν μαθηματικῶν δύο τὰς πρω-
 τίστας καὶ ἀνωτάτω ὑποθετέον ἀρχάς, τὸ ἓν (ὅπερ δὴ
 οὐδὲ ὅν πω δεῖ καλεῖν, διὰ τὸ ἀπλοῦν εἶναι καὶ διὰ τὸ
 ἀρχὴν μὲν ὑπάρχειν τῶν ὄντων, τὴν δὲ ἀρχὴν μηδέπω
 10 εἶναι τοιαύτην οἷα ἐκεῖνα ὧν ἐστὶν ἀρχή), καὶ ἄλλην
 · πάλιν ἀρχὴν τὴν τοῦ πλήθους, ἣν καὶ διαίρεσιν οἶόν
 τ' εἶναι καθ' αὐτὸ παρέχεσθαι, καὶ διὰ τοῦτο ὕγρᾱ
 τινι παντάπασιν καὶ εὐπλάδεῖ ὕλῃ, προσσηκόντως εἰς
 δύναμιν παραδεικνύντες, ἀποφαίνομεν ἂν ὁμοίαν εἶναι·
 15 ἐξ ὧν ἀποτελεῖσθαι, τοῦ τε ἐνός καὶ τῆς τοῦ πλήθους
 ἀρχῆς, τὸ πρῶτον γένος, ἀριθμῶν ἐξ ἀμφοτέρων τού-
 των μετὰ τινος πιθανῆς ἀνάγκης συντιθεμένων. καὶ
 χρὴ καθ' ἕκαστον ἐπεξιόντα τῶν ἀριθμῶν διαίρεσιν
 μὲν ἅπαντα λέγειν ἅπαντι ἀριθμῷ καὶ μέγεθος ὡς
 20 καθόλου εἰρησθαι ταύτην τὴν φύσιν παρέχεσθαι, τὸ
 δὲ ποῖον εἶναι ἕκαστον αὐτῶν, ἔτι δὲ ὠρισμένον καὶ
 ἓν, τὴν ἀδιάφορον καὶ ἄτμητον ἀρχὴν ἐπισφραγιζο-
 μένην ἀποτυποῦν. κακὸν δὲ ἢ αἰσχροὺς τὸ τοιοῦτον
 οὐ προσήκον ἴσως ἐστὶ τιθέναι, ᾧ συμβαίνει μεγέθους
 25 τε καὶ διαίρεσεως, ἔτι δὲ αὕξης, καθ' ἑαυτὸ αἰτίῳ εἶναι·
 οὔτε γὰρ ἐν τοῖς ἄλλοις τὸ τοιοῦτο γένος εἰς κακὴν
 μοῖραν εἰώθαμεν τιθέναι, ἔστιν ὅτε δὲ τοῦ μεγαλο-
 πρεποῦς καὶ ἐλευθερίου μετὰ ποιότητος συμπλεκόμενον
 τινος τὸ μέγα αἷτιον λέγομεν ἂν ἴσως ἀληθεύοντες·
 ὥστε πολλοῦ δέον ἂν εἶη κακὸν προσαγορεύεσθαι
 αὐτό. εἰ γὰρ δὴ καὶ τὴν τοῦ ἐνός τις φύσιν ἐπαινῶν
 τυγχάνοι δι' αὐτάρκειάν τε καὶ τὸ καλῶν τινῶν ἐν
 τοῖς ἀριθμοῖς αἷτιον εἶναι, πῶς οὐκ ἄλογον ἂν εἶη
 5 λέγειν τὸ κακὸν ἢ τὸ αἰσχροὺς δεκτικὸν κατὰ φύσιν
 τοῦ τοιούτου πράγματος εἶναι; οὐ γὰρ ἂν ἔτι πάντῃ
 συμβαίνει ψεκτὸν εἶναι τὸ κακὸν καὶ τὸ αἰσχροὺς, εἴπερ

- τὸ δεκτικόν τινος ἐπαινετοῦ καὶ αὐτὸ δεῖ ἐπαινετὸν
 προσαγορεύειν. αὕτη μὲν οὖν οὕτως ἡμῖν νοείσθω
 10 ἀρχή. τὸ δὲ ἐν οὔτε καλὸν οὔτε ἀγαθὸν ἄξιον καλεῖν,
 διὰ τὸ καὶ τοῦ καλοῦ καὶ τοῦ ἀγαθοῦ ὑπεράνω εἶναι·
 προΐούσης γὰρ πορρωτέρω ἀπὸ τῶν ἐν ἀρχῇ τῆς φύ-
 σεως πρῶτον μὲν τὸ καλὸν ἐφάνη, δεύτερον δὲ καὶ
 μακροτέραν ἀπόστασιν ἐχόντων τῶν στοιχείων ἀγαθόν.
 15 ἡ τοίνυν πρώτη ὑποδοχή τε καὶ μέγεθος, ἣ δ' τι δῆ-
 ποτε δεῖ προσαγορεύειν αὐτήν, τὸ τῶν ἀριθμῶν εἶδος
 ἀπετύπωσε πλήθει μὲν ἀόριστον εἰκότως εἶδει δὲ πως
 ὠρισμένον, ἐκ τῆς τοῦ ἐνὸς παραλαβοῦσα μοίρας. εἰ
 μὲν οὖν μίαν ἄπειρον ἄπασιν ὑποθήσει τις ὕλην τε
 20 καὶ ὑποδοχήν, ἄλογον ὥς τὸ εἰκὸς συμβήσεται τό, τῆς
 ἐνὸς ἰδέας ἐγγιγνομένης ἐν αὐτῇ, εἴπερ ὁμοία διὰ
 παντός, μὴ οὐ τὰ αὐτὰ καὶ γένη πάλιν ἀποτελεῖσθαι.
 ὥστε πάντα ἀριθμοὺς τὰ γένη παντελῶς συμβήσεται
 εἶναι· διαφορὰν γὰρ οὐχ ἔξομεν ἀρμόττουσαν προσά-
 25 ψαι, διὰ τί δῆποτε ἐνθάδε μὲν ἀριθμῶν ἐγεννήθη
 φύσις, μετὰ δὲ τοῦτο γραμμῶν καὶ ἐπιπέδων καὶ σχη-
 μάτων, καὶ οὐκ αἰεὶ τὸ αὐτὸ γένος, ἀπὸ γε τῶν ὁμοίων
 καὶ κατὰ τὸν αὐτὸν τρόπον ἀλλήλοις συμπλεκομένων
 στοιχείων. εἰ δὲ τις μίαν μὲν ὑποθήσεται τὴν ἅπαντος
 πλῆθους τε καὶ μεγέθους αἰτίαν πρῶτην, διαφορὰς δὲ
 5 πολλὰς ἐν αὐτῇ παρεχομένην, δι' ὅπερ ἄλλα καὶ ἄλλα
 γένη κατὰ πᾶσαν τὴν φύσιν ἀποτίκτειν πεφυκέναι,
 5 καίπερ τοῦ ἐνὸς ὁμοίου ἐγγιγνομένου διὰ παντός, οὐδὲ
 μὴν οὐδὲ τούτου διὰ τὴν παχύτητα τῆς ὕλης ἀκριβῆ
 τὴν ἑαυτοῦ φύσιν ἐμφαίνοντος αἰεὶ, καθάπερ ἐν τισιν
 εἰκαίοις ξύλοις σχῆμα, ταῦτα μὲν οὖν οὐκ ἀλόγως ἂν
 ἴσως συμβαίνοι αὐτῷ, τὸ δὲ πρῶτον στοιχεῖον εἰς
 10 τοσαύτας διαφορὰς διαιρέσεις ἔχειν δυσχεραίνει ἂν τις
 προσηκόντως ἴσως, ἄλλως τε καὶ εἰ παντάπασιν εἴη
 διήκων κατὰ ταῦτα τὰ παραδείγματα· τὸ γὰρ ἀπλού-
 στατον πανταχοῦ στοιχεῖον εἶναι. λοιπὸν οὖν τινα
 15 μετέραν μεγέθους αἰτίαν ὑποθεμένους, ὥς ἐν ἀριθμοῖς
 15 μονάδα κατὰ τὸ ἐν, οὕτως στιγμὴν ἐν γραμμαῖς

p. 16, 14 ἐχόντων] ἔχον Festa (in crit. app.) || 15 μέγεθος] Festa suspects corruption || 20 ὑποδοχήν Villosion: ἀποδοχήν F || τῆς] τῆς <τοῦ> Festa (in crit. app.) || p. 17, 3 αὐτῇ Festa (in se, Arcerius): αὐτῇ F || 12 διήκων] διήκων Vitelli

τιθέναι, θέσιν δὲ καὶ διάστασιν τόπων περί τε γραμ-
 μάς καὶ χωρία καὶ στερεὰ πρῶτον, κατὰ τὰ αὐτὰ δὲ
 καὶ τόπον ἐνταῦθα φανῆναι παρὰ τὸ τὴν τῆς ὑποδοχῆς
 διαφορὰν ἰδιὸν τι παραδιδόναι τῷ ἀπ' αὐτῆς γένει.
 20 ἔτι δὲ καὶ τὸ συνεχὲς καὶ τὸ συμμεμολυσμένον μᾶλλον
 τῶν ἀριθμῶν καὶ παχύτερον ἐκ ταύτης ἂν τις αἰτιώ-
 μενος καὶ λέγων, ἴσως οὐ διαμαρτάνοι. καὶ μέχρι μὲν
 δὴ τούτων γένος ἂν εἴη ἀποτετελεσμένον δευτέρον·
 εἰς ταῦτο γὰρ τίθημι γραμμάς τε καὶ στερεὰ καὶ πλάτη
 25 χωρίων. πρώτη μὲν οὖν ἡ τῶν ἀριθμῶν ἐστὶν ὕλη,
 δευτέρα δὲ ἡ τῶν γραμμῶν τε καὶ τῶν ἐπιπέδων καὶ
 στερεῶν σχημάτων. καὶ τῶν ἄλλων δὲ ὡσαύτως μαθη-
 μάτων, ὅσα ἂν καὶ ὅποια ἂν εὕρῃ ὁ λόγος, τὰς οἰκείας
 ὑποδοχὰς προϋποθετέον.

p. 18

Καὶ τοῦτο μὲν οὖν οὕτως ἡμῖν ἐχέτω. τὰ δὲ
 στοιχεῖα, ἐξ ὧν οἱ ἀριθμοί, οὐδέπω ὑπάρχει οὔτε καλὰ
 οὔτε ἀγαθὰ· ἐκ δὲ τῆς συνθέσεως τοῦ ἐνὸς καὶ τῆς
 τοῦ πλήθους αἰτίας ὕλης ὑφίσταται μὲν ὁ ἀριθμός,
 5 πρῶτοις δὲ ἐν τούτοις τὸ ὄν φαίνεται καὶ ἄλλος,
 ἐφεξῆς ἐκ τῶν στοιχείων τῶν γραμμῶν τῆς γεωμετρι-
 κῆς οὐσίας φανείσης, ἐν ᾗ ὡσαύτως τὸ ὄν καὶ τὸ
 καλόν, ἐν οἷς [οὔτε] οὐδὲν οὔτε αἰσχρόν ἐστὶν οὔτε
 κακόν· ἐπ' ἐσχάτῳ δὲ ἐν τοῖς τετάρτοις καὶ πέμπτοις
 10 τοῖς συντιθεμένοις ἀπὸ τῶν στοιχείων τῶν τελευταίων
 κακίαν γενέσθαι οὐ προηγουμένως, ἐκ δὲ τοῦ ἐκ-
 πίπτειν καὶ μὴ κατακρατεῖν τινα τοῦ κατὰ φύσιν.

18 τὸ] excised by Merlan || p. 18, 8 first οὔτε excised by Festa

DCMS IV deals primarily with the principles of mathematical numbers and magnitudes and with the relation of the principles and of the substances to being, beauty, goodness, and evil. The passage also contains some indications about the author's conception of mathematical numbers and magnitudes and about the relation of other kinds of substances to their respective principles. There are six steps in the argument: the first (I = p. 15, 6-23) is about the principles of number; the second (II = pp. 15, 23-16, 10) denies that multiplicity is by itself evil; the third (III = p. 16, 10-14) states that the One is above beauty and goodness; the fourth (IV = pp. 16, 15-17, 25) deals with the principles of geometrical

magnitudes; the fifth (V = p. 17, 25-29) maintains that each kind of substance must have a different material principle; the sixth (VI = p. 18, 1-12) discusses the relation of being, beauty, goodness, and evil to the different kinds of substances and their respective principles. In what follows each step of the argument will be discussed in this order; but on several occasions it will be necessary to bring in evidence from other sections and also to draw some inferences as to the author's probable views concerning some points about which he is not explicit. Only after this analysis has been completed I shall discuss the relation of the doctrines of DCMS IV to Aristotle's testimony and to Speusippus' doctrine.

I) = p. 15, 6-23. The principles of mathematical numbers ⁴¹⁸ are the One and multiplicity. They are the first and the highest principles because they are the principles of mathematical numbers and numbers are the first entities. ⁴¹⁹

The One must not be called being at all because it is simple and because it is a principle of entities; for a principle cannot be of the same kind as the entities of which it is a principle. This means that the One which is the principle of number is above or beyond being. ⁴²⁰

⁴¹⁸ Festa's suggestion to read τῶν δὲ ἀριθμῶν <καὶ πάντων> τῶν μαθηματικῶν (cf. his *Index Verborum*, p. 112, s.v. ἀριθμός) is worse than unnecessary, since the author posits different principles for numbers and for magnitudes, cf. pp. 16, 15-17, 25.

⁴¹⁹ This has been misunderstood by Merlan, who thinks that according to DCMS IV the One and multiplicity are the highest principles *tout court*. But this is not at all necessary, since the author simply says that they are the first and highest principles of mathematical numbers, which statement does not exclude the possibility of higher principles (cf. note 456 *infra*). For numbers as the first entities, i.e. the first sphere of being, cf. p. 15, 16; p. 16, 3-4 with 10-13; p. 18, 1-5.

⁴²⁰ The sentence ὅπερ δὲ οὐδὲ ὅν πω δεῖ καλεῖν can hardly mean merely that the One "is not yet an entity," as Moreau, *op. cit.* (note 410 *supra*), p. 1166 would have it. The likelihood is that οὐδὲ . . . πω here means "not at all" (cf. Merlan, *From Platonism*², p. 133, first note). But even if οὐδὲ . . . πω means "not yet," we should note that the exposition follows the ontological order of the substances (first, numbers; second, magnitudes; etc.); and, since being appears first in numbers (cf. p. 15, 16; p. 18, 3-5), it is intelligible that the author may mean that the One must not yet be called being, and imply by this that the One is above being. In fact, his use of πω here may be a trait of style (cf. p. 15, 9 μὴδέπω; p. 18, 2 οὐδέπω) somewhat similar to his use of the "polite" optative (cf. p. 15, 14 and 29; p. 16, 4; p. 17, 10 and 22). In any case, even Moreau's interpretation of the sentence ὅπερ . . . καλεῖν is incompatible both with Aristotle's testimony about Speusippus and with the latter's conception of the One (cf. p. 104 f. *infra*).

The context indicates that this is what is meant, and the interpretation is further corroborated by what we learn about the One throughout *DCMS* IV.⁴²¹

The second principle of mathematical numbers is multiplicity, which is by itself responsible for division; on account of this it can appropriately be compared to some kind of moist and pliable matter.⁴²² Though the author disclaims the use of technical terminology at least in the case of the material principle of numbers,⁴²³ he later calls multiplicity "receptacle," "matter," and "magnitude."⁴²⁴ This last name refers obviously to the fact that it is to multiplicity that the author ascribes the quantitative aspect of number; and this interpretation of the function of the material principle of numbers would be valid, as we shall see, even if Festa were right in considering μέγεθος in p. 16, 15 to be corrupt, which it probably is not.⁴²⁵

⁴²¹ Thus, in p. 16, 2-4 the One is said to be self-sufficient and the cause of beauty in numbers; in p. 16, 10-11 it is described as neither beautiful nor good because it is far above (ὑπεράνω, cf. note 434 *infra*) beauty and goodness; and it is said to be an element of number and the cause of being and beauty in it (cf. p. 18, 1-5 with p. 16, 2-4).

⁴²² Since ὅρῳ τινι παντάπασιν καὶ εὐπλαδεῖ ὄλη is a simile (cf. p. 15, 12-14), and since at least in the case of the material principle the author disclaims the use of technical terminology (cf. p. 16, 15-16), Isnardi Parente's objection to the naivety of this expression (*Proodos*, p. 106) is misconceived. Far from supporting Merlan's notion (*From Platonism*², p. 122) that this is "the language of a writer anxious to justify a metaphor not yet generally known," the words in question presuppose as well established the use of ὄλη = matter, a word used several times in *DCMS* IV in its philosophic sense (cf. p. 16, 19; p. 17, 6 and 25; p. 18, 4). Dörrie, *op. cit.* (note 409 *supra*), p. 16 maintains that εὐπλαδής is a poetic word which no other Platonist used. He fails to support the first part of his contention, however, and LSJ, *s.v.* list only the present passage. Dörrie may have had in mind the word πλαδαρός, which according to the scholiast (cf. Festa's edition, pp. 100-101, on p. 16, 15 and p. 17, 6) was the word used by Iamblichus in p. 15, 13. But πλαδαρός had already been used in prose before Iamblichus (cf. LSJ, *s.v.*).

⁴²³ Cf. p. 16, 15-16.

⁴²⁴ On "matter" cf. note 422 *supra*. On μέγεθος cf. p. 16, 15 with note 425 *infra*. On "receptacle," a term which goes ultimately back to Plato's *Timaeus* (cf. 49 A 6, etc.), cf. p. 16, 15 and 20; in p. 17, 18 the word is used of the material element of magnitudes, and in p. 17, 29 of any material element.

⁴²⁵ For the word μέγεθος = magnitude is used several times to refer to number in its quantitative aspect (cf. p. 15, 19 and 24; and the implication of p. 17, 1-2), a characteristic due to the material principle. In fact, the use of μέγεθος in reference both to numbers and to magnitudes probably indicates that the author of *DCMS* IV thinks that the material principle of magnitudes is analogous to that of numbers, cf. p. 100 f. *infra*.

From these two principles, the One and multiplicity, numbers, the first order of entities, come into being by the effect of some kind of persuasive necessity.⁴²⁶ From the present passage, as well as from others in *DCMS* IV, it is clear that numbers are generated or derived from the synthesis, composition, etc. of two principles, elements, or causes.⁴²⁷ The One is the formal, undifferentiated, and undivided principle which is responsible for each number's being a definite unit of a certain kind.⁴²⁸ On the other hand, multiplicity is responsible for each number's being a multiplicity of units so that each number is quantitatively greater than the previous one.⁴²⁹ That the numbers of *DCMS* IV are congeries of units is also clear, since they are explicitly said to be mathematical numbers. And so the implication is that the first number must be either two or three but almost certainly not one, since number is said to be a synthesis of unity and multiplicity; multiplicity necessarily implies division, and one is not a multiplicity.⁴³⁰

⁴²⁶ Pace Tarrant, *op. cit.*, pp. 133 and 145, the *πιθανή ἀνάγκη* mentioned here has nothing to do with the "bonds" of the soul in Plato's *Timaeus*, 35 A ff. but, as Merlan, *From Platonism*², p. 116 says, the expression is reminiscent of *Timaeus* 48 A. However, *πιθανή* here must be active, not passive, as Merlan thinks, for the author says that number is the result of the two elements' coming together with some kind of persuasive necessity, i.e. they cannot fail to come together and produce numbers. Merlan's "persuasive necessity" yields no good sense in this context.

⁴²⁷ Merlan, *From Platonism*², p. 116 is wrong in saying that "no details are given to explain the generation of numbers," for something important is said about it in p. 16, 15-18, cf. note 439 *infra* with the corresponding remarks in the text. The generation of numbers, and of magnitudes, too, is really a derivation which does not take place in time. On the equivalence of "principle," "cause," and "element" cf. e.g. p. 15, 6-11 with p. 16, 4, p. 17, 2, p. 17, 9-13, p. 17, 14, p. 18, 1-4, p. 18, 6, p. 18, 10.

⁴²⁸ Cf. p. 15, 21-23: each number is *ποιόν . . . , ἔτι ὁρισμένον καὶ ἕν*.

⁴²⁹ Cf. p. 15, 16-20 and 23-25.

⁴³⁰ This last point Iamblichus himself makes against Chrysippus, cf. p. 39 with note 189 *supra*. Rabinowitz, *Aristotle's Protrepticus*, I, pp. 85-86 and 88 is right in holding that in *DCMS* IV numbers are conceived as multiplicities of units so that one is not a number. Merlan's attempt to refute this (*From Platonism*², p. 131) is a failure: For in *DCMS* IV the material principle is said to be responsible for *διαίρεσις*, *μέγεθος*, and *αὔξη* in numbers (p. 15, lines 10-11, 17-20, and 23-25), whereas the fact that each number is a discrete unit is a function of the One (p. 15, 21-23). Moreover, since each number is a synthesis of the One and multiplicity (p. 15, 15-17), one cannot be a number. Furthermore, *pace* Merlan, p. 17, 14-16 does not mean that the monad is a number but merely that to the One or monad as the formal principle of numbers corresponds the point as the formal principle of lines (cf. note 444 *infra* with the corresponding remarks in the text). Finally,

II) = pp. 15, 23-16, 10. The purpose of this section is to show that, although the material principle of number is responsible for quantity, division, and increase, it is by itself ⁴³¹ neither evil nor ugly. Two arguments are advanced in support of this doctrine. The first is *a fortiori*: even in the case of other things we do not consider increase or bigness an evil; but it sometimes happens that the great united with a certain quality would rightly be called the cause of magnificence and liberality.⁴³² And so it would be far from true to say that the material principle of number is evil. The second argument is that, if it is right to praise the One because it is self-sufficient and because it is the cause of certain beauties in numbers, it would be absurd to call the material principle, which is receptive of the One, evil or ugly. For what is receptive of something praiseworthy should not be called evil or ugly. Hence multiplicity is not evil or ugly; and the implication is that it is not good or beautiful either.⁴³³

III) = p. 16, 10-14. The One is neither beautiful nor good because it is far above ⁴³⁴ beauty and goodness. For it is only when nature

Merlan and others have misunderstood the meaning and the implications of p. 16, 15-18 cf. note 439.

But Rabinowitz and apparently Merlan, too, are wrong in thinking that Speusippus' numbers are not congeries of units, cf. note 78 *supra*.

⁴³¹ Cf. p. 15, 23-25, where n.b. καὶ ἐαυτὸ ἀντὶ τοῦ εἶναι, an important restriction in connection with the author's theory of negative evil (cf. p. 102 *infra*).

⁴³² In order to connect p. 15, 27-29 with Aristotle's doctrine, Merlan, *From Platonism*², pp. 112-113 suggests that the author may have expressed himself elliptically, for he may have meant to say "the great coupled with a certain quality becomes the reason of the difference between magnificence and liberality." This interpretation, however, cannot be got out from the text.

⁴³³ But neither this nor anything else in *DCMS IV* supports Merlan's contention (*From Platonism*², pp. 127-128 and 229) that the material principle is above non-being (cf. even Krämer, *Ursprung*, p. 212, n. 55), a notion which is incompatible with the plurality of material principles that the author postulates (cf. esp. p. 17, 25-29 and p. 18, 9-10); cf. also Moreau, *op. cit.* (note 410 *supra*), p. 1166, who makes this objection to Merlan in reference to Speusippus. In any case, nothing is said about non-being in *DCMS IV*. Merlan is not alone in his attempt to read into *DCMS IV* a fundamental material principle, cf. e.g. des Places, in *Zetesis*, p. 220, who in reference to p. 16, 4 ff. says "Si la matière est pur réceptacle du devenir (ὑποδοχή), elle ne peut être appelée mauvaise."

⁴³⁴ The statement that the One is far above beauty and goodness suggests that the author is a Neopythagorean or Neoplatonic sympathizer, as does the very word ὑπεράνω. Cf. Isnardi Parente, *Proodos*, pp. 100-103, but with

moves further away from the principles that first beauty appears and second the good, even at a greater distance from the principles. The context indicates that the principles here alluded to are those of numbers, and especially the One; for no principle as such is good, and so the “*greater* distance” must mean the distance from the principles of number. Beauty appears first in numbers,⁴³⁵ and the good presumably in the third order of entities.⁴³⁶

IV) = pp. 16, 15-17, 25. The main purpose of this lengthy passage, which may be subdivided into four sections, is to establish that geometrical magnitudes must have their own peculiar principles. The author’s main concern is with demonstrating that the material principle of magnitudes must be different from that of numbers. That there is need of a different formal principle, too, is taken for granted, because it has already been said that the One is undifferentiated and undivided.⁴³⁷ Moreover, the unity of matter became a common philosophical tenet after Aristotle, and so it is against this that the author of *DCMS* IV feels he has to argue at length.⁴³⁸

The first section (*a* = p. 16, 15-18) gives some additional information about the generation of numbers, the purpose of which is to show how from the interaction of the One and the first material principle nothing but numbers can come. The author assumes the points made in section I (n.b. the inferential *τοίνυν*). The first receptacle and magnitude—or whatever name must be given to

reservations concerning her interpretation of some of the texts she cites. Like Merlan and others (cf. *contra* note 419 *supra*) Isnardi Parente appears to think that in *DCMS* IV the principles of number are necessarily the highest principles. On her misunderstanding of the good in Speusippus cf. note 466 *infra*.

⁴³⁵ Cf. p. 16, 3-4 with p. 18, 1-5.

⁴³⁶ This may be inferred from the fact that in numbers (cf. the previous note) and in magnitudes (cf. p. 18, 6-8) there is beauty but not goodness and that evil appears only in the fourth and fifth spheres of being (cf. p. 18, 9-12). And so presumably the good and not evil is present in the third sphere. Goodness also probably appears in the last two spheres of being, together with evil.

⁴³⁷ Cf. p. 15, 22-23 and the implication of p. 17, 12-13. N.b. that even in p. 17, 5-9 the author supposes that the One remains undifferentiated and undivided.

⁴³⁸ Even Aristotle ascribes only one material principle to all the Platonists with the exception of Speusippus and of an anonymous theory he mentions in several places (cf. on F 37 and the introductory note to F 40).

it—, having received its share from the portion of the One, stamped the form of the numbers (i.e. stamped the numbers) which, though reasonably indefinite in multitude, is somehow definite in shape.⁴³⁹ This means that the receptacle,⁴⁴⁰ having received its share of the One, proceeded to stamp the numbers.

Hence ($b =$ pp. 16, 18-17, 1), if one should posit one and the same infinite matter for everything, it would be impossible to explain why out of that matter, together with the form of One in it, come different kinds of entities and not always the same ones, that is, not only numbers. For we would be unable to add any appropriate difference that would explain why numbers came first and after them lines, planes, and solids, if indeed they all came out of the same elements twined together with one another and in the same way.⁴⁴¹

⁴³⁹ This passage has been misunderstood by Merlan (cf. note 430 *supra*) and by most other scholars, including Isnardi Parente, *Proodos*, p. 108 ("ἀποτυποῦν è dunque qui usato nel senso generico di 'dare una consistenza,' come se l'autore non avesse compreso il significato squisitamente filosofico del termine," and she contrasts this with the use of ἀποτυποῦν in p. 15, 23), in part because they have misconstrued the Greek in the same way as Festa did. For his punctuating with a comma after ἀπετύπωσε and after εἰκότως suggests that he took ἀόριστον and ὠρισμένον to modify the subject of ἀπετύπωσε. This is hardly likely to be right in view of the author's use of the feminine participle παραλαβοῦσα. The object of the participle must be supplied from ἐκ τῆς τοῦ ἐνός μοίρας, while ἀόριστον and ὠρισμένον modify τὸ τῶν ἀριθμῶν εἶδος, which is a periphrasis for "the numbers." I have punctuated the passage in accordance with this interpretation. Consequently, it is not merely "the first matter" that is stamping the numbers but that matter after receiving its share of the One (cf. also τῆς ἐνός ἰδέας ἐγγιγνομένης ἐν αὐτῇ in p. 16, 20-21). In short, the author is here giving a metaphorical description of the generation of numbers from the principles: the receptive matter (n.b. ἡ ὑποδοχή), which is responsible for "magnitude" (μέγεθος, cf. notes 425 and 430 *supra*) necessarily (cf. note 426 *supra*) reflecting the One, stamps the numbers; and the numbers, though reasonably indefinite in multiplicity (since the number series is infinite in one direction), a characteristic of which the material principle is responsible, are somehow definite in form, i.e. each number is a definite unit of a certain kind, a function ascribed to the One in p. 15, 20-23. (The syntactical interpretation of p. 16, 15-18 adopted here I owe to Professor Cherniss.)

⁴⁴⁰ The use of ὑποδοχή to designate the material principle of numbers and all other such principles (cf. note 424 *supra*) is characteristic of our author. According to Dörrie, *op. cit.* (note 409 *supra*) this word is not used as *terminus technicus* for matter either by Iamblichus or by any other Neoplatonic author, including Plotinus and Proclus, except when they refer to Plato's *Timaeus*.

⁴⁴¹ There is no need to read τῆς <τοῦ> in p. 16, 20, as Happ, *Hyle*, p. 213 with nn. 672-673 proposes, following a suggestion of Festa himself. Isnardi Parente's contention that the use of ὁμοιον (p. 16, 21 and 27; p. 17, 5) shows the author's uncertainty in connection with a word and concept typically

On the other hand (*c* = p. 17, 1-13), it will not do to suppose that the first cause of multiplicity and magnitude is single but provided with many differences on account of which it gives birth to many different kinds of entities throughout the whole of nature. And this even supposing that the One remained the same or similar to itself all through and did not even always show its own clear nature due to the density of matter, as does a shape in pieces of wood picked up at random. Even if this would not be an illogical description of what happens to the One, one would be wrong, especially after going through these examples,⁴⁴² to ascribe to the first (material) principle so many differences for divisions; for an element is everywhere the simplest thing. Since in the following lines (p. 17, 13-19) the author posits peculiar material and formal principles for magnitudes, it is clear that he considers that his argument in sections *b* and *c* is complete. The implication of this is twofold: first that numbers are not formal causes of lines or of any other magnitude; second, that the point as the formal principle of magnitudes is different from the One.⁴⁴³

Speusippean (*Proodos*, p. 106) seems to me a misconceived criticism. There is no reason to suppose that Speusippus himself could not have used *δμοιον* in a non-technical sense and, moreover, in p. 16, 21 and in p. 17, 5 our author uses the word in connection with two possibilities which he rejects. Finally, as Festa himself saw (cf. his "addenda et corrigenda") there is no reason to insert *στερεῶν* before *σχημάτων* in p. 16, 26-27.

⁴⁴² In p. 17, 12 *διήκων* yields a better meaning than Vitelli's *διήκον*, which Happ, *Hyle*, p. 214, n. 682 is inclined to adopt. For why should the author say that one might be wrong in ascribing to the first (material) element so many differences for divisions, *especially* if the element had pervaded according to these examples?

⁴⁴³ These two points, and others as well (cf. notes 430 *supra* and 444 *infra*), were misunderstood by Rabinowitz, *Aristotle's Protrepticus*, I, pp. 88-91, partly because he wrongly believes that the doctrine of numbers, magnitudes, and their respective principles in *DCMS* IV modifies Speusippus' doctrine to avoid Aristotle's criticisms of it in *Metaphysics* 1085 A 32-B 4 and B 12-34 (= F 40 + F 51). Since these two passages are analyzed *infra* (cf. comm. *ad locc.*), there is no need here to discuss Rabinowitz's misunderstanding of the Aristotelian evidence (e.g. his misconstruction of 1085 B 29 οὐ γὰρ μὴ γε μόνον σιγμὴ ἐστὶν αὖτη, which simply means that the point which is the principle of magnitudes is not the only point but that there are others, and *not*, as Rabinowitz, *op. cit.*, p. 90 thinks, that even the point which is the principle of magnitudes must be divisible). But the following must be said against him: (a) The purpose of the argument in p. 17, 1-13 is not at all to show that a material principle with multiple differences will produce disconnected entities; nothing is said about this and, moreover, the author's point is simply that an element must be simple so that out of it cannot come all the different spheres of being. (b) The possibility of the One remaining

Hence ($d = p. 17, 13-25$), having postulated a different (material) cause for magnitudes, it remains to posit the point in lines as, in numbers, the monad according to the One. (This means that there is a relation of similarity between the formal cause of numbers and that of magnitudes.⁴⁴⁴) The material element of magnitudes is not given a name here. Because there are three dimensions,⁴⁴⁵ it is said to provide, first, position and spatial interval for lines, planes, and solids, i.e. one and two dimensions; and second, also space, i.e. the third dimension.⁴⁴⁶ The continuity, sc. of geometrical magnitudes, the fact that they are more tainted⁴⁴⁷ than numbers and also

the same (p. 17, 5-9) is only for the sake of the argument about the material principle. (c) Since the One is said to be undifferentiated and undivided (p. 15, 22-23), and since as an element it, too, must be simple (p. 17, 12-13, about the material element), it is clear the author of *DCMS IV* assumes that there is a plurality of formal principles just as there must be a plurality of material ones. (d) *DCMS IV* does not derive the point from the One (cf. the following note). (e) It is *not* the case that in *DCMS IV* magnitudes are "aggregates of numbered atomic points," since here the point is not an entity (cf. note 448 *infra*) and the magnitudes are said to be continuous (cf. p. 17, 20-22) as numbers are not (cf. p. 15, 21-22).

⁴⁴⁴ The words λοιπόν . . . , ὡς ἐν ἀριθμοῖς μονάδα κατὰ τὸ ἓν, οὕτως στιγμήν ἐν γραμμαῖς τιθέναι (p. 17, 13-16) do not at all imply that the monad and the point are derived from the One and the material elements of numbers and magnitudes, respectively, as Rabinowitz, *Aristotle's Protrepticus*, I, p. 90 thinks, nor yet that one as a monad is a number, as Krämer, *Ursprung*, p. 211, n. 50 would have it. The expression μονάδα κατὰ τὸ ἓν is used merely to indicate the relation of similarity between the formal principles of numbers and magnitudes. For, though in *DCMS IV* numbers are multiplicities of units (cf. note 430 *supra* with the corresponding remarks in the text), magnitudes are not aggregates of points in any sense whatever, since the point is not considered to be entity (cf. note 448 *infra*). Moreover, the point is not here derived from the One at all (cf. note 443 *supra*). Finally, in *DCMS IV* one cannot be a number because each number must be a multiplicity of units (cf. p. 95 *supra*).

⁴⁴⁵ Cf. p. 17, 18-19, where in line 18 it is wrong to excise τό (as Merlan, *From Platonism*², p. 130 and Happ, *Hyle*, p. 216, n. 687 do), because παρὰ τὸ . . . παραδιδόναι gives the reason why the material principle must provide three dimensions. Since the material principle of magnitudes generates only magnitudes, there is really no contradiction with the argument in p. 17, 1-13.

⁴⁴⁶ For lines have one dimension, planes two, and solids three. I should think that the author mentions "solids" in line 17 because position and intervals are also to be seen in solids.

⁴⁴⁷ This is probably closer to what the author meant by συμμεμολυσμένον than "underdone," because with this word he probably meant to refer not so much to the impenetrability of solids, as Merlan thinks, but to the fact that magnitudes are closer to the sensibles than numbers are. On this word cf. Merlan, *From Platonism*², pp. 120-121, Dörrie, *op. cit.* (note 409 *supra*), p. 16, Tarrant, *op. cit.*, p. 134 with n. 17, Isnardi Parente, *Proodos*, p. 107

denser, must be ascribed to their matter. And lines, planes, and solids belong to the same order of being, namely, the second.

The implications of this passage are important. (i) The point is not considered to be a magnitude but is only a principle, element, and cause. This means that the point, like the One, is not an entity.⁴⁴⁸ (ii) Since the point is only said to be the formal element of lines, the author's conception of the derivation of planes and solids cannot be ascertained.⁴⁴⁹ (iii) The possibility of going from one dimension (line) to two (plane) and from two to three (solid) is ascribed to the material principle of magnitudes. (iv) In going from numbers (first sphere of being) to magnitudes (second sphere) it is clear that we are going from what is more to what is less perfect. This relative imperfection is also ascribed to the material principle. (v) Just as there is a relation of similarity between the formal principles of numbers and magnitudes, the One and the point, so there is between the material principles also. An indication of this is the author's use of the word μέγεθος = "magnitude" to refer to the material principle of numbers and to the geometrical magnitudes themselves.⁴⁵⁰

V) p. 17, 25-29. Next the author draws a general inference from his lengthy argument to establish the need for a second material principle in the case of magnitudes: there must be a different material principle in the case of all the other subjects of sciences; as many as the argument will find. The need for a peculiar formal

with notes 50-52. The occurrence of μωλύτερον in *Epist. Socr.* 30, 14 (p. 12, 7 [Sykutris]) is of no significance, not merely because the contexts are different, as Isnardi Parente says, but also because the letter in all probability was not written by Speusippus. Cf. my *Pseudo-Speusippean Letters*.

⁴⁴⁸ This follows from these considerations: (a) magnitudes constitute the second sphere of being (p. 17, 22-23 and 25-27; p. 18, 6-7); (b) only lines, planes, and solids are magnitudes (cf. p. 17, 24-25 with p. 16, 26-27); (c) the point is the cause and element of lines (p. 17, 14-16 with p. 18, 6-7). Hence the point is not an entity, for being and beauty appear only when the magnitudes, beginning with lines, have been "generated" (cf. p. 17, 15 with p. 18, 6-7). And so the point as the principle of lines is parallel to the One as the principle of numbers.

⁴⁴⁹ This inference is based on the fact that the point is said to be the cause and element of lines only (cf. p. 17, 15 with p. 18, 6-7), that the material principle of magnitudes is responsible for one, two, and three dimensions (cf. p. 17, 16-19), and that lines, planes, and solids constitute a single sphere of being (p. 17, 22-25).

⁴⁵⁰ Cf. note 425 *supra*.

principle in each case is not even mentioned here because the author assumes that the formal element is always not only simple but also undifferentiated and undivided.⁴⁵¹ Hence, each sphere of being must have its own peculiar formal principle. Difference, division, increase, magnitude, etc. are functions of the material principles only.

VI) = p. 18, 1-12. In the final section the author makes use of the points established in the preceding ones in order to draw some general conclusions as to the relation of being, beauty, goodness, and evil to the principles and to the substances. The elements of numbers are neither beautiful nor good. Numbers are the first entities in which being and beauty appear. Next, from the elements of lines appears the geometrical substance. In geometricals, too, there is being and beauty but no evil or ugliness.⁴⁵² Evil appears only towards the extreme (sc. of the spheres of being), in the fourth and fifth kinds of entities, which come from the last elements. Evil, however, does not appear as a direct result of the elements but because of something in nature that falls out and is not able to rule. This implies the doctrine of evil as the incomplete information of the material. Presumably the fourth and fifth matters, because they are more dense than the first three, are not perfectly informed by the respective formal principles and so give birth to imperfect entities. But matter itself is not evil according to *DCMS* IV.⁴⁵³

Dörrie⁴⁵⁴ maintains that this last section is not part of *DCMS* IV but is due to Iamblichus himself. His arguments are that the use of *ὀφλιστάται* (p. 18, 4) is late and that the doctrine of the fourth and fifth spheres of being has not been mentioned in the first five sections. But the first argument is based on the assumption that *DCMS* IV comes verbatim from Speusippus, which is not the case, as we shall see. The second argument really indicates that the present passage is part of *DCMS* IV. Had p. 18, 1-12 been due to Iamblichus himself, there would be no reasonable explanation for his failure to explain, here or in the first three chapters of the

⁴⁵¹ Cf. note 443 *supra*.

⁴⁵² It is of course clear that there is no evil or ugliness in numbers, either.

⁴⁵³ Cf. p. 18, 9-12. On the negative conception of evil cf. note 470 *infra* with the corresponding remarks in the text. On *προηγούμενως*, stressed by Merlan, *From Platonism*³, p. 122, cf. comm. on F 75 with note 256 there and Isnardi Parente, *Proodos*, p. 109, n. 54.

⁴⁵⁴ *Op. cit.* (note 409 *supra*), p. 16.

De Comm. Math. Sc., what are the fourth and fifth spheres of being. But if Iamblichus took *DCMS* IV from another author, it is readily intelligible why the two last spheres of being are mentioned without any explanations as to what they are. Presumably the author from whom Iamblichus is excerpting had already explained what are the five spheres of being; but Iamblichus extracted from him only what he needed for his purposes here, i.e. the doctrine about the principles of mathematical numbers and magnitudes. It is even likely that in the original treatise p. 18, 1-12 did not come immediately after p. 17, 29, but that Iamblichus placed it there because he wished to make it clear that, even where it appears, evil is not to be ascribed to the principles at all.⁴⁵⁵ In fact, in addition to some peculiarities of terminology and syntax, the unexplained introduction of the two last spheres of being in p. 18, 1-12 is really the strongest argument to support the theory that *DCMS* IV is an extract from an author earlier than Iamblichus; for Merlan's notion that the doctrine of *DCMS* IV is incompatible with that of Iamblichus is at the very least unwarranted and probably incorrect.⁴⁵⁶ Therefore, the use of *ὁρίσται* here is itself evidence that *DCMS* IV is not a verbatim quotation from Speusippus. That the other features of vocabulary and style show differences from Iamblichus does not establish Merlan's interpretation either,⁴⁵⁷ since they

⁴⁵⁵ Kohnke, *op. cit.* (cf. note 409 *supra*) saw this, but without good reason postulated that Iamblichus got *DCMS* IV from Posidonius.

⁴⁵⁶ To begin with, in p. 18, 13-23, which, *pace* Merlan, is not merely a summary of what precedes, Iamblichus makes it clear that he considers *DCMS* IV to be compatible with his own doctrine. This shows that Iamblichus probably took the One and multiplicity to be the highest and first principles of mathematical numbers and not the highest principles *tout court* (cf. p. 15, 6-14 with notes 418 and 419 *supra*). Moreover, Iamblichus postulated a first One, which is ineffable, a second One, which is the absolute One, followed by the duality of principles, the limit and the unlimited, which according to Damascius may also be called, respectively, the One and many (cf. Damascius, *Dubit. et Sol.*, I, pp. 101, 14-15 and 103, 6-10, etc.). Now in chapter III of the *De Comm. Math. Sc.* Iamblichus says that this pair of principles are the principles of mathematical substance as a whole, and in the introductory passage to *DCMS* IV (cf. p. 14, 18-23) he says that what comes next is to discover the individual principles of each kind of mathematics. Finally, since it is more probable than not that Iamblichus did not identify the first One with the good (cf. Zeller, III, ii⁸, pp. 744 ff., esp. p. 745, n. 5), it is possible he also thought that none of the formal principles of mathematics is either good or evil.

⁴⁵⁷ On these cf. notes 420, 422, 424, 425, 426, 434, 440, 441, 447, 453 *supra*, and n. 472 *infra*, to which the use of *συμπλέκεσθαι* in reference to the "union" of the elements (cf. p. 15, 28; p. 16, 28) should be added, cf. Dörrie, *op. cit.* (note 409 *supra*), p. 16.

may simply be due to the author of *DCMS* IV. It remains to show that this author cannot have been Speusippus and that *DCMS* IV cannot be used as a source for the reconstruction of his thought.

Now there are several similarities between the doctrine of *DCMS* IV and that which Aristotle ascribes to Speusippus: The One and multiplicity as the principles of mathematical numbers, the point as similar to the One and a material principle different from multiplicity but presumably similar to it as the principles of geometrical magnitudes; the plurality of material principles; the absence of beauty and goodness from the One; the material principle as free from evil. Merlan and others have alleged that two passages in *DCMS* IV are doctrinal and linguistic parallels to passages in Aristotle which refer to Speusippus. These are: p. 15, 7-8 τὸ ἐν (ἔπερ δὴ οὐδὲ ὄν πω δεῖ καλεῖν . . .), which should be compared with *Metaphysics* 1092 A 14-15 (= F 43) ὥστε μηδὲ ὄν τι εἶναι τὸ ἐν αὐτό; and p. 16, 12-14 προϋούσης γὰρ πορρωτέρω ἀπὸ τῶν ἐν ἀρχῇ τῆς φύσεως πρῶτον μὲν τὸ καλὸν ἐφάνη, δεύτερον δὲ καὶ μακροτέραν ἀπόστασιν ἔχόντων τῶν στοιχείων τάγαθόν, to be compared with *Metaphysics* 1091 A 35-36 (= F 44) ἀλλὰ προελθούσης τῆς τῶν ὄντων φύσεως καὶ τὸ ἀγαθὸν καὶ τὸ καλὸν ἐμφαίνεσθαι.

It is remarkable, however, that even in these last two instances, in which the linguistic parallelism between the two suggests that the author of *DCMS* IV is indebted to Aristotle, the doctrine of *DCMS* IV is incompatible with that which Aristotle ascribes to Speusippus, as well as with Speusippus' doctrine.

Let us begin with the doctrine of the One. Whether the words οὐδὲ ὄν πω δεῖ καλεῖν were inspired by Aristotle or not, and whether they mean that the One is above being or is merely anterior to being,⁴⁵⁸ they are incompatible with Aristotle's testimony about Speusippus. For ὥστε μηδὲ ὄν τι εἶναι τὸ ἐν αὐτό (= F 43) is in its context a clause of *intended* result by means of which Aristotle, from his own point of view, tries to show the absurd consequences of Speusippus' doctrine that there is no goodness and, hence, no "perfection" in the highest principles. Consequently, in this clause Aristotle is not reporting Speusippus' doctrine at all.⁴⁵⁹ Moreover, Aristotle *does state* that Speusippus' One is a substance,

⁴⁵⁸ Cf. note 420 *supra*.

⁴⁵⁹ Cf. comm. on F 43 and p. 33 f. *supra*.

i.e. is an entity. In *Metaphysics* 1028 B 21-22 (= F 29a) he says that, *beginning with the One*, Speusippus posited more substances than Plato,⁴⁶⁰ and in *Metaphysics* 1083 A 23-35 (= F 34) he attacks Speusippus precisely because he hypostatized the One.⁴⁶¹ Furthermore, Speusippus' first entities are the numbers; for him one is a number and, as such, the principle of mathematical number. Hence, for him the One and the number one are identical, and so the One is an entity.⁴⁶² Finally, the doctrine of *DCMS* IV implies that the first number is two, whereas Speusippus considered one to be the first odd number.⁴⁶³

In *DCMS* IV the One and multiplicity are the principles, elements, and causes of mathematical numbers and the numbers are derived from these two principles. This is also the doctrine Aristotle ascribes to Speusippus, even though he tries to prove that Speusippus, as well as the other Platonists, must really have generated the numbers.⁴⁶⁴ Speusippus, however, could not have derived the numbers in any sense whatsoever, since he thought that each number has separate existence and is, as an eternal and immutable entity, directly apprehended by the mind. And his principles of number are neither causes nor elements.⁴⁶⁵

The author of *DCMS* IV maintains that there is beauty in mathematical numbers and magnitudes and that the good appears after these two kinds of entities. But the Aristotelian testimony shows that Speusippus did not distinguish between beauty and goodness in this sense and clearly implies that there is neither goodness nor beauty in mathematics.⁴⁶⁶ It is Aristotle himself who in his

⁴⁶⁰ Cf. comm. on F 29a and pp. 33-34 *supra*.

⁴⁶¹ Cf. comm. on F 34 and pp. 37-40 *supra*.

⁴⁶² Cf. pp. 33-37 *supra*.

⁴⁶³ Cf. comm. on F 28, lines 18-22 and contrast notes 427, 430, and 439 *supra* with the corresponding remarks in the text.

⁴⁶⁴ Cf. pp. 27-28 *supra* and the references to *DCMS* IV in the previous note.

⁴⁶⁵ Cf. pp. 38-42 *supra*.

⁴⁶⁶ Cf. comm. on F 42a, F 43, F 44, F 45a and pp. 41-44 *supra*.

Isnardi Parente, *Proodos*, p. 109 contends that the good is present in Speusippus' mathematics. But she does so only because she wrongly believes that otherwise mathematics would be less perfect than the lower spheres of being where the good appears. The Aristotelian testimony makes it clear, however, that Speusippus restricted the good to entities which undergo a process of natural development. This means that there can be no goodness, nor beauty either, in mathematics because they are separately existing and immutable entities. (Cf. also p. 41 f. *supra* for an additional and

doctrine distinguishes beauty from goodness within the final cause, and it is he who maintains that there is beauty but not goodness in mathematics.⁴⁶⁷ However, he never ascribes this last notion to Speusippus, and Speusippus' doctrine is incompatible with it.

What was said above about the derivation of numbers from their principles in *DCMS* IV and about the absence of any derivation of numbers in Speusippus is also true about the derivation of magnitudes: Speusippus' separately existing geometrical magnitudes are not derived from the principles, nor are the principles causes and elements of magnitudes,⁴⁶⁸ nor is there any beauty in geometrical entities. But there are some additional peculiarities about magnitudes in *DCMS* IV which are incompatible with Speusippus and with the Aristotelian testimony about him. Aristotle states as characteristic of Speusippus' theory the belief in the substantiality of the non-material point, so that the point is both an entity and the principle of magnitude. Speusippus' own words in F 28 also show that for him the point is a substance and the principle, or first principle, of magnitudes; and he makes it clear that all four—point, line, plane and solid—are magnitudes.⁴⁶⁹ The doctrine of *DCMS* IV about the point is different, however, and corresponds to the author's doctrine of the One. He regards the point as the formal principle and element of the line, but does

fundamental reason why Speusippus cannot admit goodness and beauty within the mathematics.) Aristotle in *Metaphysics* 1091 B 22-26 (= F 45a) makes clear two things: (a) That it was precisely because he posited the One as the principle of *mathematical* number that Speusippus avoided identifying the One with the good. (b) That, if the One were the good, there would be a great abundance of goods in as much as the monads would become species of goods. This means that Speusippus' doctrine avoids the absurdity of postulating the presence of the good in numbers. Now, even if Speusippus himself did not use this argument (cf. on F 45a), it is hardly likely that Aristotle would have thought that it is implied by his doctrine, had he known that Speusippus asserted the presence of the good in numbers. Finally, the "perfection" of the decad is unrelated to the good but is simply the result of its mathematical properties (cf. on F 28, lines 13-14, and 15). And Aristotle's "report" in F 43 is in all probability influenced by his own inference from the biological analogy Speusippus used and by Aristotle's own doctrine in which "perfection" and "goodness" are necessarily connected (cf. comm. on F 43 and Ch. II, f *supra*). Speusippus' doctrine implies the rejection of such a necessary connection and assigns a more restricted rôle to the good (cf. also note 470 *infra*).

⁴⁶⁷ Cf. note 205 *supra*.

⁴⁶⁸ Cf. pp. 44-47 *supra*.

⁴⁶⁹ Cf. p. 37 with note 183 *supra*.

not consider it to be an entity. For he explicitly states that lines, planes, and solids constitute the second sphere of being, namely geometrical magnitudes, and that being and beauty appear in geometrical magnitudes as a result of the synthesis or combination of the elements.

Finally, the doctrine of negative evil in *DCMS* IV is not that of Speusippus, for, *pace* Merlan and others, Theophrastus criticizes Speusippus precisely because he failed to explain evil as a result of the incomplete information of matter.⁴⁷⁰

The preceding arguments conclusively prove, I trust, that *DCMS* IV cannot go back to Speusippus and also that this text cannot be used as a source for the reconstruction of his thought. The probability is that Iamblichus took *DCMS* IV from an earlier author. The several similarities of the doctrine of this text to Aristotle's testimony about Speusippus and the presence in *DCMS* IV of several Aristotelian doctrines which are not those of Speusippus⁴⁷¹ suggest that its author culled Aristotle's *Metaphysics* in search of a doctrine about the principles, mathematical, being, goodness, beauty, and evil that answered to his own philosophical beliefs. This doctrine he found in some of Aristotle's statements about Speusippus; and these he proceeded to modify in the light of other Aristotelian passages and also of his own doctrine. That the author of *DCMS* IV lived several centuries after Aristotle is made probable by his doctrine of the One and by some characteristic features of his vocabulary.⁴⁷² And it is quite likely that he was a Neopythagorean or Neoplatonic sympathizer. But, whoever and whatever he may have been, there is no evidence that he knew Speusippus' writings and there are good reasons to think that, either wittingly or unwittingly, he misinterpreted Aristotle's testimony about Speusippus. Even more significant is the fact that *DCMS* IV is incompatible with basic tenets of Speusippus' doctrine in those cases in which it appears to be close to it.

⁴⁷⁰ Cf. F 83 with comm. *ad loc.* and note 405 *supra* with the corresponding remarks in the text.

⁴⁷¹ For example, the presence of beauty in mathematical and the doctrine of negative evil.

⁴⁷² Cf. note 457 *supra*. It must be added that the use of ὕλη for matter can hardly be Speusippean.

CHAPTER SIX

CONCLUSION

Even the bare outlines of Speusippus' metaphysical, epistemological, and ethical doctrines given in chapters two, three, and four of this work show that he was a philosopher of considerable originality.⁴⁷³ In view of this and of the likelihood that Plato himself chose him to be his successor as head of the Academy,⁴⁷⁴ it is surely unwarranted and arbitrary to contend, as some scholars do,⁴⁷⁵ that he was a poor philosopher. It is clear that Plato was the main influence upon Speusippus' thought. For his most important metaphysical and epistemological doctrines show not only that he adopted some of the basic tenets of Platonism but also that these doctrines are answers to the same problems Plato tried to solve. Thus, take for example Speusippus' doctrine that numbers and magnitudes are separate, eternal, and immutable objects of knowledge; that mathematical numbers are directly apprehended by the mind; that the propositions of mathematics cannot be true of the sensibles; that by the direct knowledge of number together with the data provided by an infallible faculty of perception which participates in reason the mind is able to derive all other knowledge; and that there is a relation of non-symmetrical similarity between the several kinds of substances which ultimately depends upon the separately existing numbers. All these interrelated doctrines are not only similar to some of Plato's own but are really answers to the same kinds of problems which Plato's philosophy tries to solve. For Plato's own main doctrines—the theory of ideas, the conception of the soul as a perpetual entity to which the apprehension of the ideas is so to say “innate,” knowledge as recollection, etc.—were meant as an answer to the question whether there is such a thing as knowledge which is fundamentally different from perception and correct opinion. If there is, as Plato thought there is, then for him there must be a soul with the power to apprehend

⁴⁷³ For Speusippus' main doctrines and for his relation to Plato's the reader is referred to Chs. II-IV *supra*.

⁴⁷⁴ Cf. pp. 8-11 *supra*.

⁴⁷⁵ Cf. note 32 *supra*.

the objects of knowledge, these objects must themselves be eternal and immutable entities outside of time and space, and phenomenal existence must imitate, or participate in, the eternal entities called ideas.⁴⁷⁶ Speusippus' main doctrines, then, are not only similar to Plato's but are also a different answer to the same problems which presuppose some of Plato's own central beliefs: that the mind apprehends eternal and unchangeable entities which exist apart from the sensibles, that the human soul is endowed with a faculty (mind) capable of such apprehension, and that there must be some kind of direct knowledge. And even Speusippus' bond of similarity among his several kinds of substances is but a modification of Plato's fundamental assumption that phenomena imitate, or participate in, the eternally existing objects of knowledge. The reconstruction of the reasons why Speusippus modified Plato's theory is discussed in chapters two and three, and so we need not pursue this topic here.

There is some evidence that Speusippus pointed out the similarity of his doctrine to certain Pythagorean tenets.⁴⁷⁷ It is intelligible why he did so, for he probably saw in the early Pythagorean notion that everything is but number an antecedent of his own belief that numbers are the first entities. Our evidence indicates that he used some early Pythagorean tenets in order to put forward his own doctrines. But, even in this last case, what is significant is that he uses the Pythagorean doctrines in question for his own purposes, not simply to report them; and his own doctrines are essentially at variance and often incompatible with those of the early Pythagoreans. Nor is there any reason to think that Speusippus invariably referred to the Pythagoreans as his predecessors. The widespread notion that he did so is unwarranted; and that his philosophy is indebted to them in essentials is contradicted by all the pertinent information we have, including the testimony of Aristotle.⁴⁷⁸

The extant evidence points to an unmistakable fact: that Speusippus' thought exercised a considerable influence upon Aristotle

⁴⁷⁶ Cf. esp. pp. 13 and 70-71 *supra* and Cherniss, "The Philosophical Economy of the Theory of Ideas," *AJP* 57 (1936), pp. 445-456 = *Selected Papers*, pp. 121-132.

⁴⁷⁷ On Speusippus and the Pythagoreans cf. note 415 *supra*.

⁴⁷⁸ On this last point cf. esp. p. 71 *supra* and comm. on F 33, F 38, line 1, F 50-52, F 62 with note 202.

and Xenocrates. There are indications in Aristotle's works that some of the difficulties he saw in Plato's theory of ideas are the same that led Speusippus to reject it,⁴⁷⁹ and that Aristotle was influenced by some of Speusippus' doctrines, though he chose not to acknowledge this influence but rather to emphasize his differences from him.⁴⁸⁰ For this attitude one can find parallels in almost any time, profession, and society; and, since we possess all of Plato's works, it is clear how deeply Aristotle was influenced by him and how little he acknowledges it. In the case of Xenocrates, the probability is that his main doctrine—the identification of the ideas with mathematical numbers—is but an attempt to bridge the gap between Plato's theory of ideas and Speusippus' separately existing mathematical numbers, partly, at least, in the light of Aristotle's criticisms of the two.⁴⁸¹ Though there are some other coincidences and parallelisms between Speusippus' and Xenocrates' doctrines,⁴⁸² we cannot always be sure of who influenced whom, for these two men and Aristotle, too, were contemporaries, and so they may have influenced one another. There is some evidence, however, that Speusippus defended Plato against some of Aristotle's criticisms by interpreting Plato's meaning in the *Timaeus*⁴⁸³ and some probability that he attacked Xenocrates' conception of the relation of the highest principles to good and evil.⁴⁸⁴ It is of course possible that Xenocrates and/or Aristotle may have influenced Speusippus, but there is no evidence to this effect.

Little remains of the numerous treatises and dialogues Speusippus is said to have written. To judge from the titles known to us and by the scanty fragments of, and reports about, his doctrine, it seems that his interests were very wide. Among other topics, he wrote on rhetoric, ethics, politics, epistemology, "logic," mathematics, and metaphysics. He undertook to produce an exhaustive classification of the whole of existence, and in this connection was probably the first to attempt a systematic classification of plants

⁴⁷⁹ Cf. pp. 70-72 *supra*.

⁴⁸⁰ Cf. esp. Ch. III, b and c.

⁴⁸¹ Cf. pp. 18-19 *supra*.

⁴⁸² Cf. for example the fact that both Speusippus and Xenocrates associate the line with two, the triangle as the first plane with three, and the pyramid as the first solid with four (cf. F 28, lines 33-36, 38-39, and 61-62 and Xenocrates, frag. 39 [Heinze]).

⁴⁸³ Cf. F 54a-b and F 61a-b with comm. *ad loc*.

⁴⁸⁴ Cf. pp. 41-44 *supra*.

and animals. In this respect, too, he was probably a predecessor of, and an influence upon, Aristotle and his school.⁴⁸⁵ But it appears that Speusippus never became a popular philosopher, and there is nothing surprising in the fact that his works have not come down to us. Some of them were probably available at least until the first century B.C. and perhaps even later. Thus, the only lengthy verbatim quotation we have from him ultimately comes from a Neopythagorean author who can hardly have lived before that time and who must have had access to the treatise or part of the treatise from which that quotation comes.⁴⁸⁶ Unlike Xenocrates, however, Speusippus was not an important influence upon the Platonic traditions known as Middle Platonism and Neoplatonism. He is sometimes cited by Iamblichus, Proclus, and others. Yet it is clear that these authors derived their information about him from intermediate sources, and that sometimes they themselves and/or their sources were trying to find in his doctrine an antecedent for their own philosophical notions.⁴⁸⁷ Finally, it is likely that Speusippus exercised some influence upon the Stoic conceptions of law and of virtue (cf. F 4 and F 77).

⁴⁸⁵ Cf. Ch. III, b with F 6-27, F 67, F 68a-b, F 69a-b. That Speusippus' classification of animals was the single most important precedent to Aristotle's own work in this field is to be inferred from the lengthy attack to which he subjects it in F 67.

⁴⁸⁶ Cf. comm. on F 28, lines 1-62.

⁴⁸⁷ Cf. esp. F 48 and F 54a-b with comm. *ad loc.*

PART TWO

TESTIMONIA (T)

1

Diogenes Laertius IV, 1-5 (I, pp. 164-166)

Τὰ μὲν περὶ Πλάτωνος τοσαῦτα ἦν ἐς τὸ δυνατόν ἡμῖν συναγαγεῖν, φιλοπόνως διειλήσασι τὰ λεγόμενα περὶ τάνδρος. διεδέξατο δ' αὐτὸν Σπεύσιππος Εὐρυμέδοντος Ἀθηναῖος, τῶν μὲν δῆμων Μυρρινούσιος, υἱὸς δὲ τῆς ἀδελφῆς αὐτοῦ Πωτώνης. καὶ ἐσχολάρχησεν ἔτη ὀκτώ, ἀρξά-
5 μενος ἀπὸ τῆς ὀγδόης καὶ ἑκατοστῆς Ὀλυμπιάδος· Χαρίτων τ' ἀγάλατ' ἀνέθηκεν ἐν τῷ μουσεῖῳ τῷ ὑπὸ Πλάτωνος ἐν Ἀκαδημείᾳ ἰδρυθέντι. καὶ ἔμεινε μὲν ἐπὶ τῶν αὐτῶν Πλάτωνι δογμάτων. οὐ μὴν τό γ' ἦθος διέμεινε τοιοῦτος· καὶ γὰρ ὀργίλος καὶ ἡδονῶν ἡττων ἦν. φασὶ γοῦν αὐτὸν ὑπὸ θυμοῦ τὸ κυνίδιον εἰς τὸ φρέαρ ρίψαι καὶ ὑφ' ἡδονῆς ἐλθεῖν εἰς
10 Μακεδονίαν ἐπὶ τὸν Κασσάνδρου γάμον.

Ἐλέγοντο δὲ αὐτοῦ καὶ αἱ Πλάτωνος ἀκούειν μαθήτριάι, Λασθένειά τε ἡ Μαντινικῇ καὶ Ἀξιοθέᾳ ἡ Φλιασίᾳ. ὅτε καὶ Διονύσιος πρὸς αὐτὸν γράφων τωθαστικῶς φησι· 'καὶ ἐκ τῆς Ἀρκαδικῆς σου μαθητρίας ἔστι καταμαθεῖν τὴν σοφίαν. καὶ Πλάτων μὲν ἀτελεῖς φόρων τοὺς παρ' αὐτὸν
15 φοιτῶντας ἐποίει· σὺ δὲ δασμολογεῖς καὶ παρ' ἐκόντων καὶ ἀκόντων λαμβάνεις.' οὗτος πρῶτος, καθά φησι Διόδωρος ἐν Ἀπομνημονευμάτων πρώτῳ, ἐν τοῖς μαθήμασιν ἐθεάσατο τὸ κοινὸν καὶ συνωκείωσε καθ' ὅσον ἦν δυνατόν ἀλλήλοις· καὶ πρῶτος παρὰ Ἴσοκράτους τὰ καλούμενα ἀπόρρητα ἐξήνεγκεν, ὥς φησι Καινεύς. καὶ πρῶτος εὗρεν ὃ τὰ φορμῖα
20 τῶν φρυγάνων εὐογκὰ ποιοῦσιν.

Ἦδη δὲ ὑπὸ παραλύσεως καὶ τὸ σῶμα διέφθαρτο, καὶ πρὸς Ξενοκράτην διεπέμπετο παρακαλῶν αὐτὸν ἐλθεῖν καὶ τὴν σχολὴν διαδέξασθαι. φασὶ δὲ αὐτὸν ἐπ' ἀμαξίου φερόμενον εἰς τὴν Ἀκαδημείαν συναντῆσαι Διογένην καὶ Χαῖρε εἰπεῖν· τὸν δὲ φάναι, 'ἀλλὰ μὴ σύ γε, ὅστις ὑπομένεις ζῆν
25 τοιοῦτος ὢν.' καὶ τέλος ὑπὸ ἀθυμίας ἐκὼν τὸν βίον μετήλλαξε γηραιὸς ὢν. καὶ ἔστιν ἡμῶν εἰς αὐτόν·

ἀλλ' εἰ μὴ Σπεύσιππον ἐμάνθανον ὥδε θανεῖσθαι,

οὐκ ἂν ἔπεισέ μέ τις τόδε λέξαι,

ὡς ἦν οὐχὶ Πλάτωνι πρὸς αἵματος· οὐ γὰρ ἀθυμῶν

30 κάθισανεν ἂν διὰ τι σφόδρα μικρόν.

Πλούταρχος δὲ φησιν ἐν τῷ Λυσάνδρου βίῳ καὶ Σύλλα φθειρσὶν ἐκξέσαι αὐτόν. ἦν δὲ καὶ τὸ σῶμα διακεχυμένος, ὥς φησι Τιμόθεος ἐν τῷ Περί βίων. οὗτος, φησί, πρὸς τὸν ἐρῶντα πλούσιον ἀμόρφου ἔφη, 'τί δέ σοι δεῖ τούτου; ἐγὼ γάρ σοι δέκα ταλάντων εὐμορφοτέραν εὐρήσω.'

- 35 Καταλέλοιπε δὲ πάμπλειστα ὑπομνήματα καὶ διαλόγους πλείονας,
 ἐν οἷς καὶ Ἀρίστιππον τὸν Κυρηναῖον·
 Περὶ πλούτου α',
 Περὶ ἡδονῆς α',
 Περὶ δικαιοσύνης α',
 40 Περὶ φιλοσοφίας α',
 Περὶ φιλίας α',
 Περὶ θεῶν α',
 Φιλόσοφος α',
 Πρὸς Κέφαλον α',
 45 Κέφαλος α',
 Κλεινόμαχος ἢ Λυσίας α',
 Πολίτης α',
 Περὶ ψυχῆς α',
 Πρὸς Γρύλλον α',
 50 Ἀρίστιππος α',
 Τεχνῶν ἑλεγχος α',
 Ὑπομνηματικοὶ διάλογοι,
 Τεχνικὸν α',
 †Διάλογοι† Τῆς περὶ τὰ ὅμοια πραγματείας α' β' γ' δ' ε' ς' ζ' η' θ' ι',
 55 Διαιρέσεις καὶ πρὸς τὰ ὅμοια ὑποθέσεις,
 Περὶ γενῶν καὶ εἰδῶν παραδειγμάτων,
 Πρὸς τὸν Ἀμάρτυρον,
 Πλάτωνος ἐγκώμιον,
 Ἐπιστολαὶ πρὸς Δίωνα, Διονύσιον, Φίλιππον,
 60 Περὶ νομοθεσίας,
 Μαθηματικὸς,
 Μανδρόβολος,
 Λυσίας,
 Ὅροι,
 65 Τάξεις ὑπομνημάτων.
 Στίχοι Μκβ' ,δοε'. πρὸς τοῦτον γράφει καὶ Τιμωνίδης τὰς ἱστορίας, ἐν
 αἷς κατέταξε τὰς πράξεις Δίωνος [τε καὶ Βίωνος]. φησὶ δὲ καὶ Φαβωρίνος
 ἐν δευτέρῳ Ἀπομνημονευμάτων ὡς Ἀριστοτέλης αὐτοῦ τὰ βιβλία τριῶν
 ταλάντων ὠνήσατο.
 70 Γέγονε Σπεύσιππος καὶ ἕτερος, ἱατρὸς Ἡροφίλειος Ἀλεξανδρεὺς.

2 διειλήσασσι BP: διελούσι F || 4 υἱὸς δὲ n: ὅς ἦν υἱὸς BF: ἦν υἱὸς P || 9 κυνίδιον a:
 κυνάριον φ || 25 μετέλλαξε BP: διέλλαξε F || 49 Γρύλλον fr: γύλαον B: γύλον F:
 γύλλον P || 54 Τῆς . . . πραγματείας Brinkmann: τῶν περὶ τὴν πραγματείαν
 ὁμοίων MSS || 66 μκβ' ,δοε' Ritschl: x̄β̄ μ̄γδōē B (after corr.) and P: μ̄γ̄ x̄β̄ δ̄ōē
 F: om. B (before corr.) || Τιμωνίδης Westermann: σιμωνίδης MSS || 67 τε
 καὶ Βίωνος deleted by Müller

2

Academicorum Philosophorum Index Herculanensis cols. VI, 28-VII, 17 (pp. 37-40)

- Σπε[ύσιππος] μὲν οὖν πα[ρ' α]ὐ-
 τοῦ διεδέ[ξ]ατο τὴν δι[ια-
 τριβή]ν. [Σπεύ]σιππ[ο]ν [δ' εἰκό-
 νας Χαρίτων ἔ]τ' οὐ[σας ἀνα-
 5 θεῖναί φησ]ι Φιλ[όχορος καὶ
 κατε]χο[ύσας] τὸ μουσεῖ[ον,
 ἐφ' α[ῖ]ς ἐ[πιγέ]γρα[π]ται· Τά[σ]-
 δε θ[εαῖσι] θεὰς Χάριτας Μ[ού]-
 σαις [ἀ]γέ<θη>κεν Σπεύσιππ[ος]
 10 λο[γί]ων [εἶν]εκα δῶρα τε-
 λῶν. κ[α]ὶ γράφει διότι [ἔσχεν
 ἥ]δ[η τὰ] μέλη διαλυθέντα
 12 κατ[έ]στρεψέν τ' ἔτ[η] κατασ-
 χῶ[ν] ὁκτῶ τὸν περίπατον,
 οἱ δ[ὲ] γεανίσκοι ψηφ[ο]φορή-
 15 σαν[τ]ες ὅστις αὐτῶν ἡγή[[σ]]-
 σετα[ι] Ξενοκράτη[ν] εἵλοντο
 τὸν [Κα]λχηδόνιον, Ἀρι[σ]το-
 τέλους [μ]ὲν ἀποδεδημη-
 κότος εἰς Μαχεδονίαν, Με-
 20 γεδήμου δὲ τοῦ Πυρραίου
 καὶ Ἑρακλείδου τοῦ Ἑρακλε-
 ώτου παρ' ὀλίγας ψήφους ἡτ-
 τηθέντων. [ὁ] μὲν οὖν [Ἑ]ρα-
 κλείδης ἀπῆ[ρ]εν εἰς τ[ὸν]
 25 Πόντον, ὁ δὲ [Μενέδημ]ος ἔ-
 τερον περίπατον καὶ [δι]α-
 τριβήν κατε[σ]κεύασατο· [οἱ δ' ἐν
 Ἀκαδημαίαι [λ]έ[γ]οντ[αι]
 προκρίνα[[σ]]ι [τὸν] Ξενοκρ[ά]την
 30 ἀγασθέντε[ς] αὐτοῦ τ[ῆ]ν
 σωφροσύνην· ὁ γὰρ Σπ[εύσιπ]-
 πος . . εἶχε τ . να . εμον . ν
 ἀκρα[τέ]στερ[ος] . . . ον καὶ
 τῶ[ν] ἡδον[ῶν] ἥττω[ν] . . .

1 and 3 Σπεύσιππος and Σπεύσιππον Gomperz and Mekler || 1-2 παρ' αὐτοῦ διεδέξατο Gomperz || 2 on superscript cf. comm. on T2, 1-3 || 2-5 τὴν . . . φησι

Mekler || 5 Φιλόχορος Buecheler || και κατεχοῦσας Mekler: ἤδη κατέχοντα Jacoby || 7-8 ἐπιγέγραπται κτλ. Buecheler || 9 ἀνέθηκεν Gomperz || 10 λογίων Gomperz: σοφίης Buecheler: πολλῶν εἵνεκα Wilamowitz || 11 Buecheler, and cf. on T2, 11-13 || 13 ὁκτώ Buecheler || 14-15 νεανίσκοι ψηφοφορήσαντες Spengel || 16 Ξενοκράτης εἶλοντο Buecheler || 17 Καλχηδόνιον Gomperz || 17-18 Ἀριστοτέλους Spengel || 19-20 Μενεδήμου Spengel's correction || 22 παρ' ὀλίγας ψήφους Spengel || 22-23 ἡττηθέντων ὁ Saurpe || 24 ἀπῆρεν εἰς τὸν Spengel and Buecheler || 25 Μενέδημος Gomperz || 27 κατεσκευάσατο Gomperz || οἱ δ' ἐν Buecheler || 28 λέγονται Gomperz || 31-32 Σπεύσιππος Gomperz || 33-34 ἀκρατέστερος . . . ἡττων Gomperz

3

Suidas, s.v. Σπεύσιππος (IV, p. 417, 20-24)

Σπεύσιππος, Εὐρυμέδοντος, ἀδελφιδοῦς Πλάτωνος τοῦ φιλοσόφου ἀπὸ Πωτῶνης τῆς αὐτοῦ ἀδελφῆς, ἀκουστῆς αὐτοῦ Πλάτωνος καὶ διάδοχος γενόμενος τῆς Ἀκαδημίας ἐπὶ τῆς ρῆ Ὀλυμπιάδος. συνέγραψε πλεῖστα, καὶ μάλιστα φιλόσοφα. αὐστηρὸς τὴν γνώμην καὶ εἰς ἄκρον ὀξύθυμος.

2 Πωτῶνης Tarán: Ποτῶνης MSS

4

Diogenes Laertius III, 4 (I, p. 122, 11-12)

Ἔσχε (sc. Πλάτων) δ' ἀδελφοῦς Ἀδείμαντον καὶ Γλαύκωνα καὶ ἀδελφὴν Πωτῶνην, ἐξ ἧς ἦν Σπεύσιππος.

5

Diogenes Laertius III, 46 (I, p. 140, 19)

Μαθηταὶ δ' αὐτοῦ (sc. Πλάτωνος) Σπεύσιππος Ἀθηναῖος, κτλ.

6

Pap. Oxyrh. I, 12, 16-24

[ὄλυ]μπιάδι ὀγδόῃ καὶ ἑκα[το]στῇ ἐνίκα στάδιον Πολυ[κλ]ῆς Κυρηναῖος, ἥρχον δ' Ἀ[θή]νησι Θεόφιλος Θεμιστο[κλ]ῆς Ἀρχίας Εὐβουλος. ταύ[τη]ς κατὰ τὸ πρῶτον ἔτος | [Πλά]των ὁ φιλόσοφος με[τρί]λλαξεν καὶ Σπεύσιππος | [τῇ]ν σχολὴν διεδέξατο.

7

Diogenes Laertius IV, 14 (I, p. 172, 11-13)

Διεδέξατο (sc. Ξενοκράτης) δὲ Σπεύσιππον καὶ ἀφηγήσατο τῆς σχολῆς πέντε καὶ εἴκοσιν ἔτη ἐπὶ Λυσιμαχίδου ἀρξάμενος κατὰ τὸ δεύτερον ἔτος τῆς δεκάτης καὶ ἑκατοστῆς Ὀλυμπιάδος.

2 Λυσιμαχίδου B and (before corr.) F: Λυσιμάχου F (after corr.) and P

8

Eusebius-Jerome, *Chronicon*

- a. p. 118, 8-9
Speusippus insignis habetur (Ol. 96, 2 = 395 B.C.)
- b. p. 122, 5-7
Plato moritur. Post quem Academiam Speusippus tenuit (Ol. 108, 4 = 345 B.C.)
- c. p. 122, 19-20
Speusippus moritur. Cui succedit Xenocrates (Ol. 110, 2 = 339 B.C.)
- d. p. 126, 11-13
Menedemus et Speusippus philosophi insignes habentur (Ol. 116, 1 = 316 B.C.)

9

Theodoretus, *Graec. Aff. Cur.* V, 19 (p. 127, 19-21)

‘Ο δὲ Ξενοκράτης, καὶ ταῦτα τρίτος ἀπὸ Πλάτωνος ὢν (Σπευσίππου γὰρ τοῦ Πλάτωνος ἀδελφιδοῦ γεγένηται φοιτητής), κτλ.

10

Suidas, s.v. Ξενοκράτης (III, p. 494, 4-5)

Ξενοκράτης, . . . , μαθητὴς καὶ διάδοχος μετὰ Σπεύσιππον Πλάτωνος.

11

Themistius, *Orationes* XXI, 255 B (II, pp. 35, 22-36, 1)

Διὰ τοῦτο ἡσπάζετο Ἀρίστων Κλεάνθην καὶ τῶν ὁμιλητῶν ἐκοινώνει, διὰ τοῦτο Κράντορα Κράτης, διὰ τοῦτο Σπεύσιππος ἐκ Χαλκηδόνος μετεπέμπετο Ξενοκράτην.

12

[Galen], *Hist. Philos.* 3 (p. 599, 14-17)

Σπεύσιππος μὲν οὖν χρόνον τινὰ βραχὺν ἐπὶ τῆς αὐτοῦ (sc. Πλάτωνος) αἱρέσεως διαμεμενηκώς, ἀρθριτικοῖς δὲ νοσήμασι περιπεσὼν Ξενοκράτην ἀντ’ αὐτοῦ κατέστησε τῶν Πλατωνικῶν δογμάτων ἐξηγητήν.

1 αὐτοῦ B: αὐτῆς A: in hac N || 2 αἱρέσεως A: προαιρέσεως B || ἀρθριτικοῖς A: ἀρθριτικούς B || περιπεσὼν A: πεσὼν B

13

Diogenes Laertius I, 14 (I, p. 6, 5-9)

Θαλοῦ μὲν γὰρ Ἀναξίμανδρος, οὗ Ἀναξιμένης, οὗ Ἀναξαγόρας, οὗ Ἀρχέλαος, οὗ Σωκράτης ὁ τὴν ἡθικὴν εἰσαγωγών· οὗ οἱ τε ἄλλοι Σωκρατικοὶ καὶ Πλάτων ὁ τὴν ἀρχαίαν Ἀκαδημειαν συστήσάμενος· οὗ Σπεύσιππος καὶ Ξενοκράτης, οὗ Πολέμων, οὗ Κράντωρ καὶ Κράτης, κτλ.

14

Suidas, s.v. Πλάτων (IV, p. 141, 18-20)

Διέτριβε (sc. Πλάτων) δὲ ἐν τῇ Ἀκαδημίᾳ παιδεύων· καὶ διεδέξαντο τὴν σχολὴν αὐτοῦ καθ' ἓνα οἷδε· Σπεύσιππος, Ξενοκράτης, Πολέμων, Κράντωρ, Κράτης.

15

Cicero, *Academica* I, 4, 17-18

Platonis autem auctoritate, qui varius et multiplex et copiosus fuit, una et consentiens duobus vocabulis philosophiae forma instituta est Academicorum et Peripateticorum, qui rebus congruentes nominibus differebant. nam cum Speusippum sororis filium Plato
 5 philosophiae quasi heredem reliquisset, duo autem praestantissimo studio atque doctrina, Xenocratem Calchedonium et Aristotelem Stagiritem, qui erant cum Aristotele Peripatetici dicti sunt, quia disputabant inambulantes in Lycio, illi autem, quia Platonis instituto in Academia, quod est alterum gymnasium, coetus erant et
 10 sermones habere soliti, e loci vocabulo nomen habuerunt. sed utrique Platonis ubertate completi certam quandam disciplinae formulam composuerunt et eam quidem plenam ac refertam, illam autem Socraticam dubitanter de omnibus rebus et nulla affirmatione adhibita consuetudinem disserendi reliquerunt. ita facta est, quod
 15 minime Socrates probabat, ars quaedam philosophiae et rerum ordo et descriptio disciplinae. Quae quidem erat primo duobus ut dixi nominibus una; nihil enim inter Peripateticos et illam veterem Academiam differebat. abundantia quadam ingenii praestabat, ut mihi quidem videtur, Aristoteles, sed idem fons erat utrisque
 20 et eadem rerum expetendarum fugiendarumque partitio.

16

a. Elias, *In Cat.*, pp. 112, 17-23 and 112, 28-113, 4

Ἐβδομος τρόπος τῆς ἐπωνυμίας τῶν κατὰ φιλοσοφίαν αἱρέσεων ὁ ὀνομασθεὶς ἀπὸ τινος συμβεβηκότος, ὥς οἱ Περιπατητικοὶ ἀπὸ τοῦ Πλάτωνος

κατὰ περίπατον τὰς συνουσίας ποιουμένου διὰ τὸ ἅμα τῇ ψυχῇ τὸ σῶμα
 γυμνάζειν. καὶ τῶν ἀνθρωπίνων ἀναχωρήσαντος διαδέχεται τὴν σχολὴν
 5 αὐτοῦ Σπεύσιππος ὁ υἱὸς τῆς Πωτῶνης ἀδελφῆς τοῦ Πλάτωνος· οὐκ
 ἐτύγγανε γὰρ τῆνικαῦτα παρὼν ὁ Ἀριστοτέλης· μετασταλεῖς γὰρ ἦν ὑπὸ
 Φιλίππου ἐν Μακεδονίᾳ ἐπὶ τῷ παιδεῦσαι τὸν υἱὸν αὐτοῦ Ἀλέξανδρον, . . .
 ἐκεῖθεν δὲ ὑποστρέψας ὁ Ἀριστοτέλης διαδέχεται τὴν σχολὴν τοῦ
 Σπευσίππου σὺν Ξενοκράτει, καὶ ἀμφότεροι ἐλέγοντο Περιπατητικοί
 10 τοῖς τόποις διαφέροντες· οἱ μὲν γὰρ ἐκαλοῦντο Λύκειοι Περιπατητικοί,
 ὡς οἱ Ἀριστοτελικοί, οἱ δὲ ἄλλοι Ἀκαδημαῖκοι Περιπατητικοί, ὡς οἱ
 τοῦ Ξενοκράτους. τῷ χρόνῳ δέ, ὅλα συμβαίνει, ἐξέλιπε <τῶν> μὲν τὸ
 ὄνομα τοῦ τόπου καὶ ἐκαλοῦντο Περιπατητικοί χωρὶς τοῦ Λύκειοι,
 τῶν δὲ Ξενοκρατείων τὸ τῆς ἐνεργείας ὄνομα ἐξέλιπε καὶ ἐκαλοῦντο
 15 Ἀκαδημαῖκοί. Περιπατητικοὶ οὖν ἐκαλοῦντο, οὐχ ὅτι κατὰ περίπατον ἐξ-
 ηγοῦντο, ἀλλ' ὅτι διεδέξαντο τὴν σχολὴν τοῦ Πλάτωνος, διὰ μέσου Σπευσ-
 ίππου, κατὰ περίπατον ποιουμένου τὰς ἐξηγήσεις.

5 Πωτῶνης Tarán: Πρωτῶνης MSS: Ποτῶνης Busse || 10 and 13 Λύκειοι
 Brandis: λύκειοι MSS || 12 τῶν Busse: om. MSS || 15 and 17 κατὰ περίπατον
 Busse: κατὰ περιπάτων MSS

b. Ps.-Elias, *In Porph. Isag.* 29, 41-43 (pp. 69-70)

Δεῖ δὲ εἰδέναι ὅτι μετὰ τὴν τοῦ Πλάτωνος τελευτὴν μὴ ὄντος ἐκεῖ
 τοῦ Ἀριστοτέλους (μετὰ Ἀλεξάνδρου γὰρ ἦν τότε ὁ Ἀριστοτέλης)
 διεδέξατο τὴν τοῦ Πλάτωνος διατριβὴν Σπεύσιππος ὁ τούτου ἀδελφιδοῦς
 ὁ ἀπὸ Πωτῶνης τῆς ἀδελφῆς αὐτοῦ· εἴτα τελευτήσαντος τούτου μετεστεί-
 5 λαντο οἱ Ἀθηναῖοι τὸν Ἀριστοτέλην, καὶ ἐπαίδευσεν μετὰ Ξενοκράτους,
 καὶ ὁ μὲν Ἀριστοτέλης ἐν τῷ Λυκείῳ ἐδίδασκεν, ὁ δὲ Ξενοκράτης ἐν
 τῇ Ἀκαδημίᾳ. καὶ πρῶτον μὲν οὕτως ὠνομάζοντο, Λύκειοι μὲν οἱ ἀπὸ
 Ἀριστοτέλους, Ἀκαδημαῖκοι δὲ οἱ τοῦ Ξενοκράτους· ἔσχατον δὲ ἐπεκρά-
 10 τέθηκε τὸ προσηγορικὸν ὄνομα ἐπὶ τῆς σχολῆς τοῦ Ἀριστοτέλους καὶ
 ἐλέγοντο οὗτοι Περιπατητικοί, οἱ δὲ τοῦ Ξενοκράτους ἐλέγοντο μόνον
 Ἀκαδημαῖκοι ὡς ἐκ τοῦ τόπου τῆς διατριβῆς.

3 Σπεύσιππος Westerink: πεύσιππος PT || 4 Πωτῶνης Tarán: Ποτῶνης
 Westerink: ποτόνης MSS

17

a. *Vita Aristotelis Marciana*, pp. 3, 69-73 and 4, 112-117

Μετὰ δὲ τὴν Πλάτωνος τελευτὴν Σπεύσιππος μὲν ὁ Πλάτωνος
 ἀδελφιδοῦς, ἐτύγγανε γὰρ υἱὸς ὢν Πωτῶνης τῆς ἀδελφῆς Πλάτωνος,
 διαδέχεται τὴν σχολὴν. Ἀριστοτέλης δὲ στέλλεται εἰς Μακεδονίαν

μεταπεμφθεὶς ὑπὸ Φιλίππου ἐφ' ᾧ τὸν υἱὸν αὐτοῦ παιδεῦσαι.
 5 τοῦ δὲ <Σπευσίππου> τελ<ευτήσαντος> οἱ ἀπὸ τῆς σχολῆς μεταπέμπονται
 τὸν Ἀριστοτέλη. <καὶ διαδέχονται αὐτὴν αὐτός τε καὶ Ξενοκράτης>
 σωφρονέστατα. καὶ Ἀριστοτέλης μὲν ἐν Λυκείῳ, Ξενοκράτης ἐν
 Ἀκαδημίᾳ ἔνθα καὶ Πλάτων <

2 Πωτώνης Tarán: Ποτώνης MS

b. *Vita Aristotelis Latina* 13-14 and 24 (pp. 153 and 154)

Post mortem autem Platonis Speusippus quidem suscepit scholas
 suas. fuerat enim hic filius Pontonis, sororis Platonis. Aristotiles
 autem mittitur in Macedoniam, ubi docet Alexandrum filium
 Philippi, Speusippo autem nepote Platonis mortuo suos disci-
 5 pulos suscipiunt Xenocrates et Aristotiles sapientissimi viri, et Ari-
 stotiles quidem in Licio regebat, Xenocrates autem in Achademia,
 ubi et Plato studebat.

18

Vita Aristotelis Vulgata 13-14 and 18 (pp. 133 and 134)

Μετὰ δὲ τὴν τοῦ Πλάτωνος τελευτὴν διαδέχεται τὴν τούτου σχολὴν
 Σπεύσιππος ὁ ἀδελφιδοῦς αὐτοῦ. υἱὸς γὰρ ἦν οὗτος Πωτώνης τῆς τούτου
 ἀδελφῆς. ὁ δὲ γε Ἀριστοτέλης ἔρχεται ἐν <Πέλλῃ> τῇ τῶν Μακεδόνων
 πόλει, ἔνθα παιδεύει Ἀλέξανδρον τὸν κτίστην,
 5 Μετὰ δὲ ταῦτα τελευτήσαντος τοῦ Σπευσίππου μεταστέλλονται
 οἱ Ἀθηναῖοι τὸν Ἀριστοτέλην, καὶ ἀμφότεροι οὗτοι ὃ τε Ἀριστοτέλης
 καὶ ὁ Ξενοκράτης διεδέξαντο τὴν τοῦ Πλάτωνος σχολήν. καὶ ὁ μὲν
 Ξενοκράτης ἐπαίδευσεν ἐν Ἀκαδημίᾳ, ὁ δ' Ἀριστοτέλης ἐν Λυκείῳ.

2 Πωτώνης Tarán: Ποτώνης MSS || 3 Πέλλη supplied by Düring

19

a. *Anonymos Syrus*, pp. 116, 118, and 120 (transl. Baumstark)

Als aber Platon gestorben war, übernahm Speusippos, weil er
 sein Neffe war, die Schule Platons, und er schickte den Aristoteles
 kommen zu lassen, damit er sich an die Spitze der Schule Platons
 stelle. Nachdem er aber einige Zeit an der Spitze gestanden hatte,
 5 sonderte er sich zuletzt im Lykeion ab und, nachdem er dort seine
 Schule begründet hatte und als Haupt einer anderen Sekte auf-
 getreten war, wurden von diesem Orte auch seine Anhänger περι-

πατητικοί genannt, weil er, indem er im Lykeion auf und ab ging, den Anderen Vorträge zu halten pflegte.

b. Bar Hebraeus, *Chronic. Syr.*, p. 119 (transl. Baumstark)

Platon aber starb im Alter von 82 Jahren, und es folgte ihm nach sein Neffe Speusippos und mit nichten Aristoteles, da er, obgleich sein Schüler, mit seiner Sekte nicht übereinstimmte.

20

Numenius, in Eusebius, *PE XIV*, 4, 16-5, 2 (II, pp. 268, 11-269, 11) = frag. 1 (Leemans) = frag. 24 (Des Places)

Τοιαύτη μὲν τις ἡ αὐτοῦ Πλάτωνος ὑπῆρξε διαδοχή. ὅποιοι δὲ γεγονόασιν οἶδε τὸν τρόπον, λαβὼν ἀνάγνωθι τὰς ὧδε ἐχούσας Νουμηνίου τοῦ Πυθαγορείου φωνάς, ἃς τίθεται ἐν τῷ πρώτῳ ὧν ἐπέγραψε Περὶ τῆς τῶν Ἀκαδημαϊκῶν πρὸς Πλάτωνα διαστάσεως·

- 5 Ἐπὶ μὲν τοίνυν Σπεύσιππον τὸν Πλάτωνος μὲν ἀδελφιδοῦν, Ξενοκράτη δὲ τὸν διάδοχον τὸν Σπευσίππου, Πολέμωνα δὲ τὸν ἐκδεξάμενον τὴν σχολὴν παρὰ Ξενοκράτους αἰεὶ τὸ ἥθος διετεινέτο τῶν δογμάτων σχεδὸν δὴ ταῦτόν, ἕνεκά γε τῆς μήπω ἐποχῆς ταυτησὶ τῆς πολυθρυλῆτου τε καὶ εἰ δὴ τινων τοιούτων ἄλλων. ἐπεὶ εἷς γε τὰ ἄλλα πολλαχῇ παραλύνοντες, τὰ δὲ
10 στρεβλοῦντες, οὐκ ἐνέμειναν τῇ πρώτῃ διαδοχῇ· ἀρξάμενοι δὲ ἀπ' ἐκείνου καὶ θάττον καὶ βράδιον δίισταντο προαιρέσει ἢ ἀγνοίᾳ, τὰ δὲ δὴ τινι αἰτίᾳ ἄλλῃ οὐκ ἀφιλοτίμῳ ἴσως. καὶ οὐ μὲν βούλομαί τι φλαῦρον εἰπεῖν διὰ Ξενοκράτη, μᾶλλον μὴν ὑπὲρ Πλάτωνος ἐθέλω. καὶ γὰρ με δάκνει ὅτι μὴ πᾶν ἐπαθόν τε καὶ ἔδρων σφύζοντες τῷ Πλάτῳ κατὰ πάντα πάντη
15 πᾶσαν ὁμοδοξίαν. καίτοι ἄξιός ἦν αὐτοῖς ὁ Πλάτων, οὐκ ἀμείνων μὲν Πυθαγόρου τοῦ μεγάλου, οὐ μέντοι ἴσως οὐδὲ φλαυρότερος ἐκείνου, ᾧ συνακολουθοῦντες σεφθέντες τε οἱ γνώριμοι ἐγένοντο πολυτιμητίζεσθαι αἰτιώτατοι τὸν Πυθαγόραν·

5 ἀδελφιδοῦν Stephanus: ἀδελφόν MSS || 7 δὴ Mras: δὲ MSS: τι Stephanus || 9 γε Stephanus: τε MSS || 11 προαιρέσει Stephanus: παρ' αἰρέσει I: παραινέσει ON || 12 οὐκ ἀφιλοτίμῳ Tour: οὐκ ἂν φιλ. MSS || 14 σφύζοντες Stephanus: συζώντες MSS || 15 ἀμείνων Stephanus: ἀμεινον MSS || 16 φλαυρότερος Stephanus: φλαυρότερον MSS || 17 πολυτιμητίζεσθαι I: πολλοί, τιμητ. ON

21

Augustine, *De Civ. Dei VIII*, 12

Ideo quippe hos potissimum elegi, quoniam de uno Deo qui fecit caelum et terram, quanto melius senserunt, tanto ceteris gloriosiores et inlustriores habentur, in tantum aliis praelati iudicio

posterorum, ut, cum Aristoteles Platonis discipulus, vir excellentis
 5 ingenii et eloquio Platoni quidem impar, sed multos facile superans, sectam Peripateticam condidisset, quod deambulans disputare consueverat, plurimosque discipulos praeclara fama excellens vivo adhuc praeceptore in suam haeresim congregasset, post mortem vero Platonis Speusippus, sororis eius filius, et Xenocrates, dilectus
 10 eius discipulus, in scholam eius, quae Academia vocabatur, eidem successissent atque ob hoc et ipsi et eorum successores Academici appellarentur, recentiores tamen philosophi nobilissimi, quibus Plato sectandus placuit, noluerint se dici Peripateticos aut Academicos, sed Platonicos. Ex quibus sunt valde nobilitati Graeci Plotinus,
 15 Iamblichus, Porphyrius; in utraque autem lingua, id est et Graeca et Latina, Apuleius Afer extitit Platonicus nobilis. Sed hi omnes et ceteri eius modi et ipse Plato diis plurimis esse sacra facienda putaverunt.

22

Themistius, *Orationes* XXXI, 353 C-D (II, pp. 189, 22-190, 3)

Ἐμοὶ τῶν ἐπαργύρων ὀχημάτων καὶ τῶν μεγαλοφώνων κηρύκων ὑψηλοτέρα ἀρχὴ ἢ ἀπὸ τῶν λόγων, ἣν οὔτε δοῦναι βασιλεῦσιν ἔστιν οὔτε ἀφελέσθαι. ταύτην γὰρ καὶ ἐπὶ χρυσοῦ καθέζωμαι καὶ ἐπὶ ξύλου καὶ ἐπὶ χαμαιζήλου θρονίδος, ἑμαυτῷ συμπεριφέρω, καὶ τὸ σῶμα ἀπολιπόντι
 5 μόνη παραμένει. ταύτην ἄρχει τὴν ἀρχὴν μέχρι νῦν ὁ Ἀρίστωνος, ταύτην Ἀριστοτέλης, ταύτην Σπεύσιππος, ταύτην Ξενοκράτης.

23

Themistius, *Orationes* XXXIV, vii (II, p. 217, 3-9)

Καὶ εἴ τινα χρὴ καλεῖν κληρονόμον τῶν Πλάτωνος τοῦ θεοῦ δογμάτων, οὐχ οὕτω Σπεύσιππον χρὴ καλεῖν ἢ Ξενοκράτην, ἀλλὰ τὸν <τὴν> γνώμην αὐτοῦ βεβαιώσαντα ἣν πάντων μάλιστα ἐκεῖνος ἐποιήσατο ἂν εἰς ἔργον ἐκβῆναι, καὶ ἰδεῖν εἰς ταῦτόν συντρέχουσας δύναμιν πολιτικὴν καὶ φιλοσο-
 5 φίαν, καὶ μὴ πορευομένης χωρὶς δὴ φρόνησιν καὶ ἐξουσίαν.

2 <τὴν> γνώμην Gasda, Schneider: γνώμην Jacobs, Dindorf: γνώμη A ||
 4 συντρέχουσας editors, conj. Jacobs: συμπρέπουσαν A

24

a. Plutarch, *De Fraterno Amore* 491 F-492 A

Οὕτω καὶ Πλάτων ἀδελφιδοῦν ὄντα Σπεύσιππον ἐκ πολλῆς ἀνέσεως καὶ ἀκολασίας ἐπέστρεψεν, οὐδὲν οὔτ' εἰπὼν ἀνιαρὸν οὔτε ποιήσας πρὸς αὐτόν, ἀλλὰ φεύγοντι τοὺς γονεῖς ἐλέγχοντας αἰεὶ καὶ λοιδοροῦντας

ἐνδιδοὺς ἑαυτὸν εὐμενῇ καὶ ἀμήνιτον αἰδῶ τε πολλὴν ἐνειργάσατο καὶ
 5 ζῆλον ἑαυτοῦ καὶ φιλοσοφίας. καίτοι πολλοὶ τῶν φίλων ἐνεκάλουν ὥς
 μὴ νουθετοῦντι τὸ μειράκιον· ὁ δὲ καὶ πάνυ νουθετεῖν ἔλεγε, τῷ βίῳ
 καὶ τῇ διαίτῃ τῆς πρὸς τὰ αἰσχροῦ τῶν καλῶν διαφορᾶς παρέχων κατανόησιν.

b. Plutarch, *Quomodo Adulator Ab Amico Internosc.* 71 E

‘Ὁ γοῦν Πλάτων ἔλεγε νουθετεῖν τῷ βίῳ τὸν Σπεύσιππον, ὥσπερ
 ἀμέλει καὶ Πολέμωνα Ξενοκράτης ὀφθεῖς μόνον ἐν τῇ διατριβῇ καὶ
 ἀποβλέψας πρὸς αὐτὸν ἐτρέψατο καὶ μετέθηκεν.

25

a. Plutarch, *De Liberis Educandis* 10 D

Πλάτων δὲ δούλῳ λίχνῳ καὶ βδελυρῷ θυμωθεὶς, τὸν τῆς ἀδελφῆς υἱὸν
 Σπεύσιππον καλέσας ‘τοῦτον’ ἔφησεν ἀπελθὼν ‘κρότησον· ἐγὼ γὰρ πάνυ
 θυμοῦμαι.’

b. Plutarch, *Adversus Colotem* 1108 A

Καὶ ὁ Ἀριστόδημος ἄλλ’ οἶσθα’ ἔφη ‘τὸ τοῦ Πλάτωνος, ὅτι τῷ παιδί
 χαλεπήνας οὐκ αὐτὸς ἐνέτεινε πληγὰς ἀλλὰ Σπεύσιππον ἐκέλευσεν, εἰπὼν
 αὐτὸς ὀργίζεσθαι . . .’

c. Seneca, *De Ira* III, 12, 5-7

Non potuit inpetrare a se Plato tempus, cum servo suo irascere-
 tur, sed ponere illum statim tunicam et praeberē scapulas verberibus
 iussit, sua manu ipse caesus; postquam intellexit irasci se, sicut
 sustulerat manum suspensam detinebat et stabat percussuro
 5 similis; interrogatus deinde ab amico qui forte intervenerat quid
 ageret, ‘exigo’ inquit ‘poenas ab homine iracundo.’ Velut stupens
 gestum illum saevituri deformem sapienti viro servabat, oblitus
 iam servi, quia alium quem potius castigaret invenerat. Itaque
 abstulit sibi in suos potestatem et ob peccatum quoddam commotior
 10 ‘tu,’ inquit ‘Speusippe, servulum istum verberibus obiurga; nam
 ego irascor.’ Ob hoc non cecidit propter quod alius cecidisset. ‘Ira-
 scor’ inquit; ‘plus faciam quam oportet, libentius faciam: non sit
 iste servus in eius potestate qui in sua non est.’ Aliquis vult irato
 committi ultionem, cum Plato sibi ipse imperium abrogaverit?
 15 Nihil tibi liceat dum irasceris. Quare? quia vis omnia licere.

d. Valerius Maximus IV, 1, 15

Nimis liberalis Archytae moderatio, temperatior Platonis. nam
 cum adversus delictum servi vehementius exarsisset, veritus ne

ipse vindictae modum dispicere non posset, Speusippo amico castigationis arbitrium mandavit, deforme sibi futurum existimans, 5 si commisisset ut parem reprehensionem culpa servi et animadversio Platonis mereretur.

26

[Plato], *Epist.* II, 314 E 1-4

Φιλιστίωνι δέ, εἰ μὲν αὐτὸς χρῆ, σφόδρα χρῶ, εἰ δὲ οἶόν τε, Σπευσίππῳ χρῆσον καὶ ἀπόπεμψον. δεῖται δὲ σοῦ καὶ Σπεύσιππος· ὑπέσχετο δέ μοι καὶ Φιλιστίων, εἰ σὺ ἀφείης αὐτόν, ἥξειν προθύμως Ἀθήναζε.

3 ἀφείης Hermann: ἀφίης AO: ἀφίης A²: ἀφῆς in marg. γρ. O⁴: ἀφήσεις O³

27

[Plato], *Epist.* XIII, 361 C 7-E 4

Εἰσί μοι ἀδελφιδῶν θυγατέρες τῶν ἀποθανουσῶν τότε ὅτ' ἐγὼ οὐκ ἐστεφανούμην, σὺ δ' ἐκέλευες, τέτταρες, ἡ μὲν νῦν ἐπίγαμος, ἡ δὲ ὀκταέτις, ἡ δὲ σμικρὸν πρὸς τρισὶν ἔτεσιν, ἡ δὲ οὐπω ἐνιαυσία. ταύτας ἐκδοτέον ἐμοὶ ἐστὶν καὶ τοῖς ἐμοῖς ἐπιτηδεύουσιν, αἷς ἂν ἐγὼ ἐπιβιῶ. αἷς δ' ἂν μή, 5 χαιρόντων. καὶ ὧν ἂν γένωνται οἱ πατέρες αὐτῶν ἐμοῦ πλουσιώτεροι, οὐκ ἐκδοτέον· τὰ δὲ νῦν αὐτῶν ἐγὼ εὐπορώτατος, καὶ τὰς μητέρας δὲ αὐτῶν ἐγὼ ἐξέδωκα καὶ μετ' ἄλλων καὶ μετὰ Δίωνος. ἡ μὲν οὖν Σπευσίππῳ γαμεῖται, ἀδελφῆς οὕσα αὐτῷ θυγάτηρ. δεῖ δὴ ταύτη οὐδὲν πλέον ἢ τριάκοντα μνῶν· μέτραι γὰρ αὐταὶ ἡμῖν προῖκες.

4 ἐπιβιῶ A²O² (ι above the line): ἐπιβῶ AO

28

[Chion], *Epist.* X (p. 60, 13-25)

Χίων Μάτριδι χαίρειν.

Πλάτωνι ἀδελφιδῶν θυγατέρες εἰσὶ τέτταρες. τούτων τὴν πρεσβυτάτην ἐδίδου Σπευσίππῳ πρὸς γάμον καὶ μετρίαν προῖκα τριάκοντα μνᾶς, πεπόμφει δ' αὐτῷ ταύτας Διονύσιος. ἐγὼ οὖν ἀσπαστὸν ἡγήσά- 5 μενος τὸν καιρὸν τάλαντον προσετίθην τῇ προικί· καὶ μέχρι μὲν πολλοῦ ἠγνάνετο, ἐξεπολιορκήσαμεν δ' αὐτόν πάνυ ἀληθεῖ καὶ δικαίῳ λόγῳ. ἔφαμεν γὰρ ὅτι 'οὐκ εἰς πλοῦτον, εἰς δὲ φιланθρωπίαν σοι συμβαλλόμεθα, τὰς δὲ τοιαύτας δωρεὰς δέχεσθαι δεῖ· αὐταὶ γὰρ τιμὰς αὔξουσιν, αἱ δ' ἄλλαι ἀτιμάζουσι. τιμᾶς μὲν οὖν φιланθρωπίαν, ἀτιμάζεις δὲ 10 πλοῦτον. ἤρμοσαι δὲ καὶ τὰς ἄλλας παιῖδας ἥδη τοῖς χαριεστάτοις Ἀθήνησιν ἄλλ' οἱ μὲν πλουτοῦσι, Σπεύσιππος δὲ χαριέστερος ὧν πένε-

ται. τοῦτ' οὖν τὸ κέρδος ᾠήθην δηλῶσαι σοι, οὗ μεῖζον ἡμῖν οὐκ οἶδ'
εἶ τι περιγενέσθαι ἐν παντὶ τῷ βίῳ δύναται.

10 ἡρμοσαι Düring: ἡρμοσας Coberus: ἡρμοσται MSS

29

Plutarch, *Dion* 17 (II, i, p. 104, 12-19)

Ταῦτ' ἐπειρᾶτο ποιεῖν Πλάτων, καὶ Δίωνα τρέψας ἐπὶ φιλοσοφίαν
ἐν Ἀκαδημείᾳ συνεῖχεν. ᾧκει μὲν οὖν ἐν ἄστει παρὰ Καλλίππῳ τινὶ τῶν
γνωρίμων, ἀγρὸν δὲ διαγωγῆς χάριν ἐκτήσατο, καὶ τοῦτον ὕστερον εἰς
Σικελίαν πλέων Σπευσίππῳ δωρεὰν ἔδωκεν· ᾧ μάλιστα τῶν Ἀθήνησι
5 φίλων ἐχρῆτο καὶ συνδιητᾶτο, βουλομένου τοῦ Πλάτωνος ὁμιλίᾳ χάριν
ἐχούσῃ καὶ παιδιᾷς ἐμμελοῦς κατὰ καιρὸν ἀπτομένη κεραυνύμενον ἐφηδύ-
νεσθαι τοῦ Δίωνος τὸ ἦθος. τοιοῦτος δὲ τις ὁ Σπεύσιππος ἦν· ἥ καὶ 'σκῶ-
ψαι ἀγαθὸν' αὐτὸν ἐν τοῖς Σίλλοις ὁ Τίμων προσηγόρευσεν.

6-7 ἐφηδύνεσθαι Bernardakis: ἀφηδύνεσθαι MSS

30

Plutarch, *Dion* 22 (II, i, p. 108, 11-27)

Ὁ δὲ Δίων ἐντεῦθεν ἤδη τρέπεται πρὸς πόλεμον, αὐτοῦ μὲν Πλά-
τωνος ἐκποδὼν ἵσταμένου δι' αἰδῶ τῆς πρὸς Διονύσιον ξενίας καὶ γῆρας,
Σπευσίππου δὲ καὶ τῶν ἄλλων ἐταίρων τῷ Δίῳ συλλαμβανόντων καὶ
παρακελευομένων ἐλευθεροῦν Σικελίαν, χεῖρας ὀρέγουσαν αὐτῷ καὶ προ-
5 θύμως ὑποδεχομένην. ὅτε γὰρ ἐν Συρακούσαις Πλάτων διέτριβεν, οἱ
περὶ Σπεύσιππον ὡς ἔοικε μᾶλλον ἀναμειγνύμενοι τοῖς ἀνθρώποις κατ-
εμάνθανον τὴν διάνοιαν αὐτῶν. καὶ τὸ μὲν πρῶτον ἐφοβοῦντο τὴν παρρη-
σίαν, ὡς διάπειραν οὖσαν ὑπὸ τοῦ τυράννου, χρόνῳ δ' ἐπίστευσαν. ὁ γὰρ
αὐτὸς ἦν παρὰ πάντων λόγος, δεομένων καὶ παρακελευομένων ἐλθεῖν
10 Δίωνα μὴ ναῦς ἔχοντα μὴδ' ὀπλίτας μὴδ' ἵππους, ἀλλ' αὐτὸν εἰς ὑπηρετι-
κὸν ἐμβάντα χρῆσαι τὸ σῶμα καὶ τοῦνομα Σικελιώταις ἐπὶ τὸν Διονύσιον.
ταῦτα τῶν περὶ Σπεύσιππον ἀγγελλόντων, ἐπιρρωσθεὶς ἐξενολόγει κρύφα
καὶ δι' ἐτέρων, ἐπικρυπτόμενος τὴν διάνοιαν. συνέπραττον δὲ καὶ τῶν πολι-
τικῶν πολλοὶ καὶ τῶν φιλοσόφων, ὃ τε Κύπριος Εὐδημος, εἰς δὲ Ἀριστο-
15 τέλης ἀποθανόντα τὸν περὶ ψυχῆς διάλογον ἐποίησε, καὶ Τιμωνίδης
ὁ Λευκάδιος. συνέστησαν δὲ καὶ Μιλτᾶν αὐτῷ τὸν Θεσσαλόν, ἄνδρα
μάντιν καὶ μετεσχηκότα τῆς ἐν Ἀκαδημείᾳ διατριβῆς. κτλ.

31

Plutarch, *Dion* 35 (II, i, p. 119, 6-17)

Ἔτι δὲ μᾶλλον αὐτοὺς ἐπῆρεν εὐτυχία τις γενομένη κατὰ θάλασσαν,
ἐν ἣ νικῆσαντες τὸν Φίλιστον, ὡμῶς καὶ βαρβαρικῶς αὐτῷ προσηνέχθη-

σαν. Ἐφορος μὲν οὖν φησιν ὡς ἀλίσκομένης τῆς νεῶς ἑαυτὸν ἀνέλοι, Τιμωνίδης δέ, πραττομέναις ἐξ ἀρχῆς ταῖς πράξεσι ταύταις μετὰ Δίωνος
 5 παραγενόμενος καὶ γράφων πρὸς Σπεύσιππον τὸν φιλόσοφον, ἱστορεῖ ζῶντα ληφθῆναι τῆς τριήρους εἰς τὴν γῆν ἐκπεσοῦσης τὸν Φίλιστον· καὶ πρῶτον μὲν ἀποδύσαντας αὐτοῦ τὸν θώρακα τοὺς Συρακοσίους καὶ γυμνὸν ἐπιδειξαμένους τὸ σῶμα προπηλακίζειν ὄντος ἤδη γέροντος· ἔπειτα τὴν κεφαλὴν ἀποτεμεῖν καὶ τοῖς παισὶ παραδοῦναι τὸ σῶμα, κελεύσαντας
 10 ἔλκειν διὰ τῆς Ἀχραδινῆς καὶ καταβαλεῖν εἰς τὰς Λατομίας. ἔτι δὲ μᾶλλον ἐφυβρίζων ὁ Τίμαιος κτλ.

32

Plutarch, *Quomodo Adulator Ab Amico Internosc.* 70 A

Ἐγραφε δὲ καὶ Σπεύσιππος αὐτῷ μὴ μέγα φρονεῖν εἰ πολὺς αὐτοῦ λόγος ἐστὶν ἐν παιδαρίοις καὶ γυναίοις, ἀλλ' ὁρᾶν ὅπως ὀσιότητι καὶ δικαιοσύνῃ καὶ νόμοις ἀρίστοις κοσμήσας Σικελίαν εὐκλεᾶ θήσει τὴν Ἀκαδημίαν.

33

Epicrates, frag. 11 (Kock, II, pp. 287-288) in Athenaeus II, 59 D-F (I, pp. 139, 6-140, 19)

τί Πλάτων

καὶ Σπεύσιππος καὶ Μενέδημος;

πρὸς τίσι νυνὶ διατρίβουσιν;

ποῖα φροντίς, ποῖος δὲ λόγος

5 διερευνᾶται παρὰ τούτοισιν;

τάδε μοι πινυτῶς, εἴ τι κατειδῶς

ἤκεις, λέξον, πρὸς Γᾶς

B. ἀλλ' οἶδα λέγειν περὶ τῶνδε σαφῶς.

Παναθηναίοις γὰρ ἰδὼν ἀγέλην

10 μειρακίων

ἐν γυμνασίοις Ἀκαδημείας

ἤκουσα λόγων ἀφάτων, ἀτόπων.

περὶ γὰρ φύσεως ἀφοριζόμενοι

διεχώριζον ζώων τε βίον

15 δένδρων τε φύσιν λαχάνων τε γέννη.

κᾶτ' ἐν τούτοις τὴν κολοκύντην

ἐξήταζον τίνος ἐστὶ γένους.

A. καὶ τί ποτ' ἄρ' ὠρίσαντο καὶ τίνος γένους

εἶναι τὸ φυτόν; δῆλωσον, εἰ κάτοισθά τι.

- 20 B. πρώτιστα μὲν <οὖν> πάντες ἄναυδοι
 τότ' ἐπέστησαν καὶ κύψαντες
 χρόνον οὐκ ὀλίγον διεφρόντιζον.
 κᾶτ' ἐξαίφνης, ἔτι κυπτόντων
 καὶ ζητούντων τῶν μειρακίων,
 25 λάχανόν τις ἔφη στρογγύλον εἶναι,
 ποίαν δ' ἄλλος, δένδρον δ' ἕτερος.
 ταῦτα δ' ἀκούων ἰατρός τις
 Σικελᾶς ἀπὸ γᾶς
 κατέπαρδ' αὐτῶν ὡς ληρούντων.
 30 A. ἥ που δεινῶς ὠργίσθησαν χλευάζεσθαι τ'
 ἐβόησαν;
 τὸ γὰρ ἐν λέσχαις [ταῖσδε] τοιαῦτα ποιεῖν ἄπρε-
 πές
 B. οὐδ' ἐμέλησεν τοῖς μειρακίοις.
 ὁ Πλάτων δὲ παρὼν καὶ μάλα πράως,
 οὐδὲν ὀρινθείς, ἐπέταξ' αὐτοῖς
 35 πάλιν <ἐξ ἀρχῆς τὴν κολοκύντην>
 ἀφορίζεσθαι τίνος ἐστὶ γένους.
 οἷ δὲ διήρουν.

2 Μενέδημος Musurus: μενέθυμος CE || 3 νυνὶ Erfurdt: νῦν CE || 5 τούτοιςιν Dindorf: τοῖσιν CE || 7 λέξων C: λέξων E || πρὸς Γᾶς MSS: πρὸς Ἀθηνᾶς Cobet: πρὸς Γᾶς καὶ θεῶν Kaibel || 11 Ἀκαδημείας Kaibel: ἀκαδημίας CE || 14 τε E: τε καὶ C || 20 οὖν Scaliger: om. CE || ἄναυδοι Kaibel: ἀναυδεῖς CE || 23 κᾶτ' ἐξαίφνης Erfurdt: κάξαίφνης CE || 29 κατέπαρδ' Schweighäuser: κατεπεέρδετ' CE || 31 λέσχαις E: λέσχες C || ταῖσδε C (above τοῖδε): excised by Wilamowitz: τοῖδε E || ἄπρεπές Casaubon: εὐπρεπές CE: <οὐκ> εὐπρεπές Kaibel in crit. app. || 33-37 om. E || 35 ἐξ ἀρχῆς added by Porson, τὴν κολοκύντην by Meineke: om. C

34

Aelian, *Varia Historia* 3, 19 (pp. 50-52)

- Λέγεται τὴν διαφορὰν Ἀριστοτέλους πρὸς Πλάτωνα τὴν πρώτην ἐκ
 τούτων γενέσθαι. οὐκ ἠρέσκετο αὐτοῦ τῷ βίῳ ὁ Πλάτων οὐδὲ τῇ κατα-
 σκευῇ τῇ περὶ τὸ σῶμα. καὶ γὰρ ἐσθῆτι ἐχρῆτο περιέργῳ ὁ Ἀριστοτέλης
 καὶ ὑποδέσει, καὶ κουράν δὲ ἐκεῖρετο καὶ ταύτην ἀθήη Πλάτῳ, καὶ
 5 δακτυλίους δὲ πολλοὺς φορῶν ἐκαλλύνετο ἐπὶ τούτῳ· καὶ μωκία δέ τις
 ἦν αὐτοῦ περὶ τὸ πρόσωπον, καὶ ἄκαιρος στωμυλία λαλοῦντος κατηγόρει
 καὶ αὕτη τὸν τρόπον αὐτοῦ. πάντα δὲ ταῦτα ὡς ἐστὶν ἀλλότρια φιλοσόφου,
 δῆλον. ἅπερ οὖν ὁρῶν ὁ Πλάτων οὐ προσίετο τὸν ἄνδρα, προετίμα δὲ
 αὐτοῦ Ξενοκράτην καὶ Σπεύσιππον καὶ Ἀμύκλαν καὶ ἄλλους, τῇ τε

10 λοιπῇ δεξιούμενος αὐτοὺς τιμῇ καὶ οὖν καὶ τῇ κοινωνίᾳ τῶν λόγων.

- Ἀποδημίας δὲ γενομένης ποτὲ τῷ Ξενοκράτει εἰς τὴν πατρίδα, ἐπέθετο τῷ Πλάτῳ ὁ Ἀριστοτέλης, χορόν τινα τῶν ὁμιλητῶν τῶν ἑαυτοῦ περισησάμενος, ὧν ἦν Μνάσων τε ὁ Φωκεὺς καὶ ἄλλοι τοιοῦτοι. ἐνόσει δὲ τότε ὁ Σπεύσιππος καὶ διὰ ταῦτα ἀδύνατος ἦν συμβαδίζειν τῷ Πλάτῳ.
- 15 ὁ δὲ Πλάτων ὀγδοήκοντα ἔτη ἐγεγόνει καὶ ὁμοῦ τι διὰ τὴν ἡλικίαν ἐπιλελοίπει τὰ τῆς μνήμης αὐτόν. ἐπιθέμενος οὖν αὐτῷ καὶ ἐπιβουλεύων ὁ Ἀριστοτέλης καὶ φιλοτίμως πάνυ τὰς ἐρωτήσεις ποιοῦμενος καὶ τρόπον τινὰ καὶ ἐλεγκτικῶς, ἀδικῶν ἅμα καὶ ἀγνωμονῶν ἦν δῆλος· καὶ διὰ ταῦτα ἀποστὰς ὁ Πλάτων τοῦ ἔξω περιπάτου, ἔνδον ἐβάδιζε σὺν τοῖς ἐταίροις.
- 20 Τριῶν δὲ μηνῶν διαγενομένων ὁ Ξενοκράτης ἀφίκετο ἐκ τῆς ἀποδημίας καὶ καταλαμβάνει τὸν Ἀριστοτέλη βαδίζοντα οὐ κατέλιπε τὸν Πλάτωνα. ὁρῶν δὲ αὐτὸν μετὰ τῶν γνωρίμων οὐ πρὸς Πλάτωνα ἀναχωροῦντα ἐκ τοῦ περιπάτου, ἀλλὰ καθ' ἑαυτὸν ἀπιόντα εἰς τὴν πόλιν, ἥρετό τινα τῶν ἐν τῷ περιπάτῳ ὅπου ποτὲ εἶη ὁ Πλάτων· ὑπώπτευε γὰρ αὐτὸν μαλακίζει-
- 25 σθαι. ὁ δὲ ἀπεκρίνατο· 'ἐκεῖνος μὲν οὐ νοσεῖ, ἐνοχλῶν δὲ αὐτὸν Ἀριστοτέλης παραχωρῆσαι πεποίηκε τοῦ περιπάτου, καὶ ἀναχωρήσας ἐν τῷ κήπῳ τῷ ἑαυτοῦ φιλοσοφεῖ.' ὁ δὲ Ξενοκράτης ἀκούσας παραχρῆμα ἤκε πρὸς Πλάτωνα, καὶ κατέλαβε διαλεγόμενον τοῖς σὺν ἑαυτῷ· ἦσαν δὲ μάλα συχνοὶ καὶ ἄξιοι λόγου καὶ οἱ μάλιστα δοκοῦντες τῶν νέων ἐπιφανεῖς. ἐπεὶ
- 30 δὲ ἐπαύσατο τῆς ὁμιλίας, ἡσπάσατό τε ὡς τὸ εἰκὸς τὸν Ξενοκράτην φιλανθρώπως καὶ αὐτὸν πάλιν ὁ Ξενοκράτης ἐκεῖνον ὁμοίως. διαλυθείσης δὲ τῆς συνουσίας οὐδὲν οὔτε εἰπὼν πρὸς τὸν Πλάτωνα ὁ Ξενοκράτης οὔτε ἀκούσας, συναγαγὼν τοὺς ἐταίρους καὶ τῷ Σπευσίππῳ πάνυ ἰσχυρῶς ἐπέπληξε παραχωρήσαντι τοῦ περιπάτου Ἀριστοτέλει, αὐτὸς τε ἐπέθετο
- 35 τῷ Σταγειρίτῃ κατὰ τὸ καρτερόν καὶ εἰς τοσοῦτον προῆλθε φιλοτιμίας, ὥς ἐξελάσαι αὐτὸν καὶ ἀποδοῦναι τὸ σύνθημα χωρίον τῷ Πλάτῳ.

15 καὶ ὁμοῦ τι Hercher: ὁμοῦ τι (τε V) καὶ Vx || 35 προῆλθε Koraïs: περιῆλθε Vx

35

Athenaeus XII, 547 D-548 B (III, pp. 207, 8-208, 21)

- Καὶ Λύκων δὲ ὁ περιπατητικός, ὥς φησιν Ἀντίγονος ὁ Καρύστιος, κατ' ἀρχὰς ἐπιδημήσας παιδείας ἔνεκα ταῖς Ἀθήναις περὶ συμβολικοῦ κώθωνος καὶ πόσον ἐκάστη τῶν ἐταιρουσῶν ἐπράττετο μίσθωμα ἀκριβῶς ἡπίστατο. ὕστερον δὲ καὶ τοῦ περιπάτου προστάς ἐδείπνιζε τοὺς φίλους
- 5 ἀλαζονείᾳ καὶ πολυτελείᾳ πολλῇ χρώμενος. χωρὶς γὰρ τῶν παραλαμ-
βανομένων εἰς αὐτὰ ἀκροαμάτων καὶ ἀργυρωμάτων καὶ στρωμνῆς ἢ
λοιπῇ παρασκευῇ καὶ ἢ τῶν δείπνων περιεργία καὶ ὁ τῶν τραπεζοποιῶν
καὶ μαγειρῶν ὄχλος τοσοῦτος ἦν ὥστε πολλοὺς ὀρρωδεῖν καὶ βουλομένους

- προσιέναι πρὸς τὴν διατριβὴν ἀνακόπτεσθαι, [καί] καθάπερ εἰς πολίτευμα
 10 πονηρὸν καὶ χορηγιῶν καὶ λειτουργιῶν πλήρης εὐλαβουμένους προσάγειν.
 ἔδει γὰρ ἄρξαι τε τὴν νομιζομένην ἐν τῷ περιπάτῳ ἀρχὴν (αὕτη δ' ἦν
 ἐπὶ τῆς εὐκοσμίας τῶν ἐπιχειρούντων) τριάκονθ' ἡμέρας, εἶτα τῇ ἔνῃ
 καὶ νέᾳ λαβόντα ἀφ' ἐκάστου τῶν ἐπιχειρούντων ἑννέα ὁβολοὺς ὑποδέξα-
 σθαι μὴ μόνον αὐτοὺς τοὺς τὴν συμβολὴν εἰσενεγκόντας, ἀλλὰ καὶ οὓς
 15 παρακαλέσειεν ὁ Λύκων, ἔτι δὲ καὶ τοὺς ἐπιμελῶς συναντῶντας τῶν
 πρεσβυτέρων εἰς τὴν σχολήν, ὥστε γίνεσθαι μὴδὲ εἰς τὸν μυρισμὸν καὶ
 τοὺς στεφάνους ἱκανὸν τὸ ἐκλεγόμενον ἀργύριον· ἱεροποιῆσαί τε καὶ
 τῶν Μουσειῶν ἐπιμελητὴν γενέσθαι. ἃ δὴ πάντα ἐφαίνετο λόγου μὲν
 ἀλλότρια καὶ φιλοσοφίας εἶναι, τρυφῆς δὲ καὶ περιστάσεως οἰκειότερα.
 20 καὶ γὰρ εἰ παρίεντό τινες τῶν μὴ δυναμένων εἰς ταῦτα ἀναλίσκειν ἀπὸ
 βραχείας καὶ τῆς τυχούσης ὀρμώμενοι χορηγίας, ὃ γ' ἔθισμός ἱκανῶς
 ἦν ἄτοπος. οὐ γὰρ ἵνα συρруέντες ἐπὶ τὸ αὐτὸ τῆς ἕως τοῦ ὀρθρίου γενο-
 μένης τραπέζης ἀπολαύσωσιν ἢ χάριν ἐξοινίας ἐποιήσαντο τὰς συνόδους
 ταύτας οἱ περὶ Πλάτωνα καὶ Σπεύσιππον, ἀλλ' ἵνα φαίνωνται καὶ τὸ
 25 θεῖον τιμῶντες καὶ μουσικῶς ἀλλήλοις συμπεριφερόμενοι, καὶ τὸ πλεῖστον
 ἕνεκεν ἀνέσεως καὶ φιλολογίας. ἃ δὴ πάντα γέγονεν δεύτερα παρὰ τοῖς
 ὕστερον τῶν τε χλανίδων καὶ τῆς πολυτελείας τῆς εἰρημένης· οὐ γὰρ
 ἔγωγε τοὺς λοιποὺς ὑπεξαίρουμαι. ὁ δὲ Λύκων ὑπ' ἀλαζονείας καὶ ἐν
 τῷ ἐπιφανεστάτῳ τῆς πόλεως τόπῳ ἐν τῇ Κόνωνος οἰκίᾳ εἶχεν εἰκοσί-
 30 κλινὸν οἶκον, ὃς ἦν ἐπιτήδειος αὐτῷ πρὸς τὰς ὑποδοχάς. ἦν δὲ ὁ Λύκων
 καὶ σφαιριστὴς ἀγαθὸς καὶ ἐπιδέξιος.

7 τραπεζοποιῶν Meineke: τραπεζῶν A || 9 καὶ excised by Schweighäuser, following Casaubon || 10 χορηγιῶν Musurus: χορηγίαν A || 18 Μουσειῶν U. Koehler: μουσῶν A || 21 ὃ γ' ἔθισμός Wilamowitz: ὃ γε μισθός A || 22 τοῦ ὀρθρίου Musurus: τοῦ θρίου A: τοῦθρίου Meineke: ὄρθρου Kaibel || 25 μουσικῶς Bergk: φυσικῶς AE || 26 παρὰ τοῖς Schweighäuser: παρ' αὐτοῖς A

36

Diogenes Laertius V, 86 (I, p. 242, 6-9)

Ἑρακλείδης Εὐθύφρωνος Ἑρακλεώτης τοῦ Πόντου, ἀνὴρ πλούσιος.
 Ἀθήνησι δὲ παρέβαλε πρῶτον μὲν Σπευσίππῳ· ἀλλὰ καὶ τῶν Πυθαγο-
 ρείων διήκουσε καὶ τὰ Πλάτωνος ἐζηλώκει· καὶ ὕστερον ἤκουσεν Ἀριστο-
 τέλους, ὡς φησι Σωτῖων ἐν Διαδοχαῖς.

37

Diogenes Laertius III, 43 (I, p. 139, 15-16)

‘... Ἐπίτροποι Λεωσθένης Σπεύσιππος Δημήτριος Ἠγίας Εὐρυμέ-
 δων Καλλίμαχος Θράσιππος.’

38

Philostratus, *Vita Apoll.* I, 35 = Suidas, s.v. Αἰσχίνης ὁ τοῦ Λυσανίου (II, p. 184, 22-25)

Σπεύσιππον τὸν Ἀθηναῖον οὕτω τι ἐρασιχρήματον γενέσθαι φασίν, ὥς ἐπὶ τὸν Κασσάνδρου γάμον ἐς Μακεδονίαν κωμάσαι ποιήματα ψυχρὰ ξυνθέντα, καὶ δημοσίᾳ ταῦθ' ὑπὲρ χρημάτων ἄσαι.

2 Μακεδονίαν Philostratus: Μακεδόνας Suidas

39

a. Athenaeus VII, 279 E-F (II, p. 119, 4-14)

Οὐ μακρὰν δὲ τούτων ἦν καὶ Σπεύσιππος ὁ Πλάτωνος ἀκουστής καὶ συγγενής· Διονύσιος γοῦν ὁ τύραννος ἐν ταῖς πρὸς αὐτὸν ἐπιστολαῖς καὶ τὰ τῆς φιληδονίας αὐτοῦ διεξερχόμενος ἔτι τε τῆς φιλαργυρίας ἐρανίζεσθαι τε παρὰ πολλῶν αὐτὸν διελέγχων ὀνειδίζει καὶ τὸν Λασθενείας τῆς
5 Ἀρκαδικῆς ἐταίρας ἔρωτα ἐπὶ πᾶσιν τε λέγει τάδε· 'σύ τισι φιλαργυρίαν ὀνειδίζεις αὐτὸς μὴδὲν ἐλλειποῦς αἰσχροκερδείας; τί γὰρ οὐ πεποίηκας; οὐχ ὑπὲρ ὧν Ἑρμείας ὤφειλεν αὐτὸς ἐκτετικῶς ἔρανον συνάγειν ἐπιχειρεῖς;'

3 καὶ τὰ . . . διεξερχόμενος] κατὰ . . . ἐπεξερχόμενος Kaibel in crit. app. vol. III, p. 205 || 5 Ἀρκαδικῆς Menagius: ἀρδικῆς A: σαρδικῆς C

b. Athenaeus XII, 546 D (III, p. 205, 5-10)

Φιλήδονος ἦν καὶ Σπεύσιππος ὁ Πλάτωνος συγγενής καὶ διάδοχος τῆς σχολῆς. Διονύσιος γοῦν ὁ τῆς Σικελίας τύραννος ἐν τῇ πρὸς αὐτὸν Ἐπιστολῇ κατὰ τῆς φιληδονίας αὐτοῦ εἰπὼν καὶ φιλαργυρίαν αὐτῷ ὀνειδίζει καὶ τὸν Λασθενείας τῆς Ἀρκαδικῆς ἔρωτα, ἥτις καὶ Πλάτωνος
5 ἡκηκόει.

3 εἰπὼν] ἐπεξιὼν Kaibel

40

Stobaeus, *Anthol.* IV, 52 a 17 (V, p. 1077, 11-14)

Σπευσίππου.

Σπευσίππῳ παραλυθέντι τὰ σκέλη Διογένης ἐξαγαγεῖν αὐτὸν τοῦ βίου παρήγει· ὁ δὲ 'οὐ τοῖς σκέλεσιν' ἔφη 'ζῶμεν, ἀλλὰ τῷ νῷ.'

2 αὐτὸν Meineke: αὐτὸν MSS || τοῦ βίου excised by Hense, following Meineke

41

Tertullian, *Apologeticum* 46, 10 (p. 161, 52-53)

Audio et quendam Speusippum de Platonis schola in adulterio perisse.

42

A. Gellius, *Noctes Atticae* III, 17, 3

Aristotelem quoque traditum libros pauculos Speusippi philosophi post mortem eius emisse talentis Atticis tribus; ea summa fit nummi nostri sestertia duo et septuaginta milia.

43 = F 4

Πρὸς Κλεοφῶντα

44 = F 28

Περὶ Πυθαγορικῶν ἀριθμῶν

45

a. Simplicius, *In Phys.*, p. 151, 6-11

Λέγει δὲ ὁ Ἀλέξανδρος ὅτι 'κατὰ Πλάτωνα πάντων ἀρχαὶ καὶ αὐτῶν τῶν ἰδεῶν τό τε ἓν ἐστὶ καὶ ἡ ἀόριστος δυάς, ἣν μέγα καὶ μικρὸν ἔλεγεν, ὥς καὶ ἐν τοῖς Περὶ τάγαθοῦ Ἀριστοτέλης μνημονεύει.' λάβοι δὲ ἄν τις καὶ παρὰ Σπευσίππου καὶ παρὰ Ξενοκράτους καὶ τῶν ἄλλων, οἵ 5 παρεγένοντο ἐν τῇ Περὶ τάγαθοῦ Πλάτωνος ἀκροάσει· πάντες γὰρ συνέγραψαν καὶ διεσώσαντο τὴν δόξαν αὐτοῦ καὶ ταύταις αὐτὸν ἀρχαῖς χρῆσθαι λέγουσι.

b. Simplicius, *In Phys.*, p. 453, 25-31

Ἀρχὰς γὰρ καὶ τῶν αἰσθητῶν τὸ ἓν καὶ τὴν ἀόριστον φασὶ δυάδα λέγειν τὸν Πλάτωνα, τὴν δὲ ἀόριστον δυάδα καὶ ἐν τοῖς νοητοῖς τιθεὶς ἄπειρον εἶναι ἔλεγε, καὶ τὸ μέγα δὲ καὶ τὸ μικρὸν ἀρχὰς τιθεὶς ἄπειρον εἶναι ἔλεγεν ἐν τοῖς Περὶ τάγαθοῦ λόγοις, οἷς Ἀριστοτέλης καὶ Ἡρακλεί- 5 δης καὶ Ἐστιάος καὶ ἄλλοι τοῦ Πλάτωνος ἐταῖροι παραγενόμενοι ἀνεγράψαντο τὰ ῥηθέντα αἰνιγματωδῶς ὥς ἐρρήθη, Πορφύριος δὲ διαρθροῦν αὐτὰ ἐπαγγελλόμενος τάδε περὶ αὐτῶν γέγραφεν ἐν τῷ Φιλήβῳ· κτλ.

c. Simplicius, *In Phys.*, p. 454, 17-22

Ταῦτα ὁ Πορφύριος εἶπεν αὐτῇ σχεδὸν τῇ λέξει, διαρθροῦν ἐπαγγειλάμενος τὰ ἐν τῇ Περὶ τάγαθοῦ συνουσία αἰνιγματωδῶς ῥηθέντα, καὶ ἴσως

ὅτι σύμφωνα ἐκεῖνα ἦν τοῖς ἐν Φιλήβῳ γεγραμμένοις. καὶ ὁ Ἀλέξανδρος δὲ καὶ αὐτὸς ἐκ τῶν Περὶ τάγαθοῦ λόγων τοῦ Πλάτωνος ὁμολογῶν λέγειν, 5 οὓς ἰστόρησαν Ἀριστοτέλης τε καὶ οἱ ἄλλοι τοῦ Πλάτωνος ἐταῖροι, τάδε γέγραφε· 'Ζητῶν γὰρ τὰς ἀρχὰς τῶν ὄντων ὁ Πλάτων, . . . '

1 ταῦτα κτλ. refers to the passage of Porphyry's commentary on Plato's *Philebus*, the quotation of which was introduced in T 45b

46

Plutarch, *Quaest. Conviv.* 612 D-E

Ἐπεὶ δὲ καὶ σοὶ δοκεῖ τῶν μὲν ἀτόπων ἢ λήθη τῶ ὄντι σοφὴ κατ' Εὐριπίδην εἶναι, τὸ δ' ὅλως ἀμνημονεῖν τῶν ἐν οἴνῳ μὴ μόνον τῶ φιλοποιῶ λεγομένῳ μάχεσθαι τῆς τραπέζης, ἀλλὰ καὶ τῶν φιλοσόφων τοὺς ἐλλο- 5 γιμωτάτους ἀντιμαρτυροῦντας ἔχειν, Πλάτωνα καὶ Ξενοφῶντα καὶ Ἀριστοτέλην καὶ Σπεύσιππον Ἐπίκουρόν τε καὶ Πρύτανιν καὶ Ἱερώνυμον καὶ Δίωνα τὸν ἐξ Ἀκαδημίας, ὡς ἄξιόν τινος σπουδῆς πεποιημένους ἔργον ἀναγράψασθαι λόγους παρὰ πότον γενομένους, ὥρῃς τε δεῖν ἡμᾶς τῶν σποράδην πολλάκις ἐν τε Ῥώμῃ μεθ' ὁμῶν καὶ παρ' ἡμῖν ἐν τῇ Ἑλλάδι παρούσης ἅμα τραπέζης καὶ κύλικος φιλολογηθέντων συναγαγεῖν τὰ 10 ἐπιτήδεια, πρὸς τοῦτο γενόμενος τρία μὲν ἤδη σοι πέπομφα τῶν βιβλίων, ἐκάστου δέκα προβλήματα περιέχοντος, πέμψω δὲ καὶ τὰ λοιπὰ ταχέως, ἂν ταῦτα δόξῃ μὴ παντελῶς ἄμουσα μηδ' ἀπροσιδίουσ' εἶναι.

47

Athenaeus I, 3 F (I, p. 7, 6-9)

Ὅτι Ξενοκράτης ὁ Χαλκηδόνιος καὶ Σπεύσιππος ὁ Ἀκαδημαϊκὸς καὶ Ἀριστοτέλης βασιλικούς νόμους ἔγραψε.

1-2 ὅτι . . . ἔγραψε C: om. E || 2 βασιλικούς marked with dots in C, probably indicating excision

48

Athenaeus XI, 506 E-F (III, p. 120, 2-14)

Οὗτος δ' ἐστὶ Πλάτων, ὃν Σπεύσιππὸς φησι φίλτατον ὄντα Περδίκκῃ Φιλίππῳ τῆς βασιλείας αἷτιον γενέσθαι. γράφει γοῦν Καρύστιος ὁ Περγαμηνὸς ἐν τοῖς Ἱστορικοῖς Ὑπομνήμασιν οὕτως· 'Σπεύσιππος 5 πυνθανόμενος Φίλιππον βλασφημεῖν περὶ Πλάτωνος εἰς ἐπιστολὴν ἔγραψέ τι τοιοῦτον· ' . . . ὥσπερ ἀγνοοῦντας τοὺς ἀνθρώπους ὅτι καὶ τὴν ἀρχὴν τῆς βασιλείας Φίλιππος διὰ Πλάτωνος ἔσχεν. Εὐφραῖον γὰρ ἀπέστειλε τὸν Ὠρεΐτην πρὸς Περδίκκῃαν Πλάτων, ὃς ἔπεισεν ἀπομερίσαι τινὰ χώραν Φιλίππῳ. διατρέφων δ' ἐνταῦθα δύναμιν, ὡς ἀπέθανε Περδίκ-

κας, ἐξ ἐτοίμου δυνάμεως ὑπαρχούσης ἐπέπεσε τοῖς πράγμασι.' τοῦτο
 10 δ' εἴπερ οὕτως ἀληθείας ἔχει, θεὸς ἂν εἰδείη.

1-2 Περδίκκῃ Gomperz, who as an alternative proposed to excise the MSS' impossible Ἀρχελάῳ

49

Porphry, *Vita Pyth.* 53 (p. 46, 12-19)

Πρὸς δὲ τούτοις τὸν Πλάτωνα καὶ Ἀριστοτέλη Σπεύσιππὸν τε καὶ
 Ἀριστόξενον καὶ Ξενοκράτη, ὡς φασὶν οἱ Πυθαγόρειοι, τὰ μὲν κάρπιμα
 σφετερίσασθαι διὰ βραχείας ἐπισκευῆς, τὰ δ' ἐπιπόλαια καὶ ἐλαφρὰ
 καὶ ὅσα πρὸς ἀνασκευὴν καὶ χλευασμὸν τοῦ διδασκαλείου ὑπὸ τῶν
 5 βασκάνως ὕστερον συκοφαντούντων προβάλλεται συναγαγεῖν καὶ ὡς
 ἴδια τῆς αἵρέσεως καταχωρίσαι.

4 ἀνασκευὴν Burkert, *Lore and Science*, p. 95, n. 52: διασυρμὸν or διαστροφὴν
 Shorey, *CP* 27 (1932), pp. 175-176: διασκευὴν MSS

FRAGMENTA (F)

1

a. Diogenes Laertius III, 2 (I, p. 121, 9-15)

Σπεύσιππος δ' ἐν τῷ ἐπιγραφομένῳ Πλάτωνος περιδείπνῳ καὶ Κλέαρ-
χος ἐν τῷ Πλάτωνος ἐγκωμίῳ καὶ Ἀναξιλίδης ἐν τῷ δευτέρῳ Περὶ
φιλοσόφων φασὶν ὡς Ἀθήνησιν ἦν λόγος ὥραιαν οὔσαν τὴν Περικτιόνην
βιάζεσθαι τὸν Ἀρίστωνα καὶ μὴ τυγχάνειν· παυόμενόν τε τῆς βίας
5 ἰδεῖν τὴν τοῦ Ἀπόλλωνος ὄψιν· ὅθεν καθαράν γάμου φυλάξαι ἕως τῆς
ἀποκυήσεως.

2 Ἀναξιλίδης F, P (after corr.), and Jerome, *Adv. Iov.*: Ἀναξιλήδης B:
Ἀναξιιάδης P (before corr.): Ἀναξιλαίδης Cobet: Ἀναξιλειδης Lang || 3 ὡς
BF: om. P || ἦν FP: om. B

b. Jerome, *Adversus Iovinianum* I, 42 (p. 384, 27-30)

Speusippus quoque sororis Platonis filius et Clearcus in laude
Platonis et Anaxilides in secundo libro philosophiae Perictionem,
matrem Platonis, fasmate Apollinis oppressam ferunt, et sapientiae
principem non aliter arbitrantur nisi de partu virginis editum.

2 Anaxilides AC: Amaxilides ES₅ || 3 fasmate] fasmatae ES: phantasmate
(fant. A) ₅AC || Apollinis S₅: Appollinis EAC || 4 partu] partum ES ||
virginis] virgis ₅

2

Apuleius, *De Platone* I, 2 (p. 83, 11-17)

Talis igitur ac de talibus Plato non solum heroum virtutibus
praestitit, verum etiam aequiperavit divum potestatibus. nam
Speusippus domesticis documentis instructus et pueri eius acre in
perci<pi>endo ingenium et admirandae verecundiae indolem laudat
5 et pubescentis primitias labore atque amore studendi inbutas refert
et in viro harum incrementa virtutum et ceterarum convenisse
testatur.

3 acre edd.: aere MSS || 3-4 in perciendo edd.: inperciendo (— perti — B)
MSS || 5 pubescentis] pubescentes B³ MV

3

Diogenes Laertius IX, 23 (II, p. 449, 5-7)

Λέγεται δὲ (sc. ὁ Παρμενίδης) καὶ νόμους θεῖναι τοῖς πολίταις, ὡς
φησι Σπεύσιππος ἐν τῷ Περὶ φιλοσόφων.

1-2 ὡς . . . φιλοσόφων] om. F

4

Clement, *Stromata* II, 4, 19, 3 (II, pp. 122, 23-123, 2)

Σπεύσιππος γὰρ ἐν τῷ Πρὸς Κλεοφῶντα πρώτῳ τὰ ὅμοια τῷ Πλάτῳ
ἔοικε διὰ τούτου γράφειν· 'εἰ γὰρ ἡ βασιλεία σπουδαῖον ὃ τε σοφὸς μόνος
βασилεύς καὶ ἄρχων, ὁ νόμος λόγος ὢν ὁρθὸς σπουδαῖος.'

5

a. Aristotle, *Sophistici Elenchi* 174 B 19-27

Ἔτι καθάπερ καὶ ἐν τοῖς ῥητορικοῖς, καὶ ἐν τοῖς ἐλεγκτικοῖς ὁμοίως
τὰ ἐναντιώματα θεωρητέον ἢ πρὸς τὰ ὑφ' ἑαυτοῦ λεγόμενα ἢ πρὸς οὓς
ὁμολογεῖ καλῶς λέγειν ἢ πράττειν, ἔτι πρὸς τοὺς δοκοῦντας τοιούτους
ἢ πρὸς τοὺς ὁμοίους, ἢ πρὸς τοὺς πλείστους ἢ πρὸς πάντας. ὥσπερ τε καὶ
5 ἀποκρινόμενοι πολλάκις, ὅταν ἐλέγχωνται, ποιοῦσι διττόν, ἂν μέλλῃ
συμβαίνειν ἐλεγχθῆσεσθαι, καὶ ἐρωτῶντας χρηστέον ποτὲ τούτῳ πρὸς
τοὺς ἐνισταμένους—ἂν ὥδι μὲν συμβαίῃ ὥδι δὲ μή, ὅτι οὕτως εἴληφεν,
οἷον ὁ Κλεοφῶν ποιεῖ ἐν τῷ Μανδροβούλῳ.

1 First καὶ om. uΛ || 2 ἐναντιώματα] ὑπεναντιώματα u || ἑαυτοῦ] αὐτοῦ Λ ||
4 last πρὸς] πρὸς τοὺς u || τε] γε B || 6 ἐλεγχθῆσεσθαι] ἐλέγχθεσθαι CcuΛ ||
τούτῳ] τοῦτο A¹c

b. Anonymous, *In Aristot. Soph. Elench. Paraphrasis*, p. 40, 8-14

Ἔτι ὥσπερ ἐν τοῖς καθ' ὁμωνυμίαν οἱ ἀποκρινόμενοι ποιοῦσι πολλάκις
ἐλεγχόμενοι (διαίρουσι γὰρ ὕστερον συναισθόμενοι τῆς ἀπάτης τὸ
διττόν, καὶ ὥς ἐπ' ἄλλου σημαινομένου δεδώκασιν ἢ ὃ συνῆξεν ὁ ἐρωτῶν),
οὕτω καὶ τοὺς ἐρωτῶντας χρηστέον ποτὲ τούτῳ πρὸς τοὺς ἐνισταμένους
5 τῶν ἐρωτωμένων ὥς οὐκ ἐλεγχόμενους, ἂν ὥδι μὲν συμβαίῃ ὥδι δὲ μή,
ὅτι οὕτως εἴληφε καὶ προέτεινεν ὃ συνήγαγεν, οἷον ὁ Κλεοφῶν ποιεῖ ἐν
τῷ Μανδροβούλῳ τῷ Πλατωνικῷ διαλόγῳ.

6 δ] ἢ MN || ποιεῖ] ποιεῖν N || 7 Μανδροβούλῳ] μανδραβούλω MSS

6

Athenaeus II, 61 C (I, p. 143, 23-24)

ΣΙΑ. Σπεύσιππος ἐν β' Ὅμοίων φησὶ ἐν ὕδατι γίνεσθαι, σελίνῳ
ἐλείφῃ τὸ φύλλον ἑοικὸς.

1 Ὅμοίων Musurus: δμ E: δμιον C || φησὶ] φησὶ <σίον> Schweighäuser

7

Athenaeus II, 68 E (I, p. 161, 22-26)

Σπεύσιππος δ' ἐν τοῖς Ὅμοις τὸν πέπον καλεῖ σικύαν· Διοκλῆς

δὲ πέποινα ὀνομάσας οὐκ ἔτι καλεῖ σικύαν· καὶ ὁ Σπεύσιππος δὲ σικύαν εἰπὼν πέποινα οὐκ ὀνομάζει.

8

Athenaeus III, 86 C-D (I, p. 200, 8-9 and 13-15)

Σπεύσιππος δ' ἐν β' 'Ομοίων παραπλήσια εἶναι κήρυκας, πορφύρας, στραβήλους, κόγχους. ἔτι ὁ Σπεύσιππος ἐξῆς πάλιν ἰδίᾳ καταριθμεῖται κόγχους, κτένας, μῦς, πίννας, σωλῆνας, καὶ ἐν ἄλλῳ μέρει ὄστρεα, λεπάδας.

9

Athenaeus III, 105 B (I, p. 240, 19-21)

Σπεύσιππος δὲ ἐν β' 'Ομοίων παραπλήσιά φησιν εἶναι τῶν μαλακοστράκων κάραβον, ἀστακόν, νύμφην, ἄρκτον, καρκίνον, πάγουρον.

10

Athenaeus IV, 133 B (I, p. 302, 22-23)

Ἔστιν δ' ἡ κερκώπη ζῶον ὅμοιον τέττιγι καὶ τιτιγονίῳ, ὡς Σπεύσιππος παρίστησιν ἐν δευτέρῳ 'Ομοίων.

1 τιτιγονίῳ edd. (cf. Photius, *Lex.*, II, p. 217 [Naber]): τρυγονίῳ AC || 2 δευτέρῳ Kaibel, vol. III, p. 664: 8 MSS

11

Photius, *Lexicon*, s.v. πηνίον (II, pp. 88-89) = Suidas, s.v. πηνίον (IV, p. 126, 18-22)

Πηνίον· ζῶον ὅμοιον κώνωπι· Ἀριστοφάνης Νεφέλαις. 'Κεῖσεσθον ὥσπερ πηνίῳ βινουμένῳ'· ἀντὶ τοῦ ξηροῦ· σκώπτει γὰρ τοὺς περὶ Χαιρεφῶντα εἰς ξηρότητα καὶ ἀσθένειαν· ὅτι δὲ κώνωπος εἰδός ἐστι, Σπεύσιππος ἐν τῷ β' τῶν ὁμοιοτήτων φησὶν οὕτως· πηνίον, ἐμπίς, κώνωψ.

4 β Photius: ιβ Suidas

12

a. Athenaeus VII, 300 E (II, p. 162, 10-12)

ΕΡΥΘΡΙΝΟΣ. Ἀριστοτέλης ἐν τῷ περὶ ζῶων καὶ Σπεύσιππος παραπλήσιά φησιν εἶναι φάγρον, ἐρυθρίνον, ἥπατον.

b. Athenaeus VII, 327 C (II, p. 220, 9-10)

ΦΑΓΡΟΣ. Σπεύσιππος ἐν δευτέρῳ 'Ομοίων παραπλήσιά φησιν εἶναι φάγρον, ἐρυθρίνον, ἥπατον.

c. Athenaeus VII, 301 C (II, p. 163, 26-27)

Σπεύσιππος δ' ὅμοιον φάγῳ τὸν ἥπατον.

13

Athenaeus VII, 303 D (II, p. 168, 23-24)

Καὶ Σπεύσιππος δ' ἐν δευτέρῳ Ὅμοίων διίστησιν αὐτάς (sc. τὰς θυννίδας) τῶν θύννων.

14

Athenaeus VII, 308 D (II, p. 180, 2-4)

Σπεύσιππος δ' ἐν δευτέρῳ Ὅμοίων ἐμφερεῖς φησιν εἶναι μελάνουρον καὶ κορακῖνον.

15

a. Athenaeus VII, 313 A (II, p. 189, 5-7)

Σπεύσιππος δ' ἐν δευτέρῳ Ὅμοίων ὁμοιά φησιν εἶναι τῇ μαινίδι βόακα καὶ σμαρίδας.

b. Athenaeus VII, 286 F (II, p. 133, 25)

Σπεύσιππος δὲ καὶ οἱ ἄλλοι Ἀττικοὶ βόακας (sc. καλοῦσι τοὺς βῶκας).

16

Athenaeus VII, 313 D-E (II, p. 190, 6-8)

Ὅμοιον δὲ εἶναι τῷ μελανούρῳ φησὶ Σπεύσιππος ἐν δευτέρῳ Ὅμοίων τὸν καλούμενον ψύρον.

1 δὲ added by C: om. A || ἐν C: δ' ἐν A

17

Athenaeus VII, 318 E (II, p. 201, 7-9)

Εἶδη δ' ἐστὶ πολυπόδων ἐλεδώνη, πολυποδίνη, βολβιτίνη, ὁσμύλος, ὡς Ἀριστοτέλης ἱστορεῖ καὶ Σπεύσιππος.

1 βολβιτίνη Rose: βολβοτύνη A || 2 Ἀριστοτέλης, cf. Rose, *Aristot. Pseudepigr.*, p. 300

18

Athenaeus VII, 319 B-C (II, p. 202, 16-18 and 24-26)

ΠΕΡΚΑΙ. τούτων μέμνηται Διοκλῆς καὶ Σπεύσιππος ἐν δευτέρῳ Ὅμοίων, παραπλησίως εἶναι λέγων πέρκην, χάνναν, φυκίδα. . . .

ΠΕΡΚΗ. καὶ ταύτης Ἐπίχαρμος ἐν Ἡβας γάμῳ μέμνηται καὶ Σπεύσιππος ἐν β' τῶν Ὀμοίων καὶ Νουμήνιος, ὧν τὰ μαρτύρια πρόκειται.

19

Athenaeus VII, 319 D (II, p. 203, 12-13)

Καὶ Σπεύσιππος αὐτὴν (sc. τὴν ῥαφίδα) βελόνην καλεῖ.

20

Athenaeus VII, 323 A-B (II, pp. 210,27-211, 4)

Σπεύσιππος δὲ ἐν δευτέρῳ Ὀμοίων ὡς παραπλήσια ἐκτίθεται κέστραν, βελόνην, σαυρίδα. καὶ οἱ Ἀττικοὶ δὲ ὡς ἐπὶ τὸ πολὺ τὴν σφύραιναν καλοῦσι κέστραν, σπανίως δὲ τῷ τῆς σφυραίνης ὀνόματι ἐχρήσαντο.

21

Athenaeus VII, 323 F (II, p. 212, 22-23)

Τοῦτο δὲ σημειωτέον πρὸς Σπεύσιππον λέγοντα εἶναι ὅμοια σηπίαν τευθίδα.

22

Athenaeus VII, 324 F (II, p. 214, 24-26)

Σπεύσιππος δ' ἐμπερῇ φησιν εἶναι κόκκυγα, χελιδόνα, τρίγλαν.

23

Athenaeus VII, 329 F (II, p. 226, 5-6)

Σπεύσιππος δ' ἐν β' Ὀμοίων παραπλήσιά φησιν εἶναι ψῆτταν, βούγλωσσον, ταινίαν.

24

Athenaeus IX, 369 B (II, p. 306, 10-12)

Σπεύσιππος δ' ἐν δευτέρῳ Ὀμοίων ῥαφανίς, φησί, ῥογγυλίσ, ῥάφυς, ἀνάρρινον ὅμοια.

25

Athenaeus IX, 387 C (II, p. 344, 5-7)

Μνημονεύει δ' αὐτῶν (sc. τῶν φασιανῶν) καὶ Σπεύσιππος ἐν δευτέρῳ Ὀμοίων. φασιανὸν δὲ οὗτοι κεκλήκασιν αὐτὸν καὶ οὐ φασιανικόν.

2 οὗτοι, sc. Theophrastus, Aristotle, Speusippus

26

Athenaeus IX, 391 D (II, p. 353, 15-16)

Καὶ Σπεύσιππος δ' ἐν δευτέρῳ Ὅμοίων χωρὶς τοῦ σ κῶπας αὐτοὺς (sc. τοὺς σκῶπας) ὀνομάζει.

27

Hesychius, s.v. συβώτας (IV, p. 90, 48)

Συβώτας· Σπεύσιππος ὁ φιλόσοφος, ζῶν τι.

28

[Iamblichus], *Theologoumena Arithmeticae*, pp. 82, 10-85, 23

Ὅτι καὶ Σπεύσιππος ὁ Πωτώνης μὲν υἱὸς τῆς τοῦ Πλάτωνος ἀδελφῆς, διάδοχος δὲ Ἀκαδημίας πρὸ Ξενοκράτου, ἐκ τῶν ἐξαιρέτως σπουδασθεισῶν αἰὲ Πυθαγορικῶν ἀκροάσεων, μάλιστα δὲ τῶν Φιλολάου συγγραμμάτων, βιβλίδιον τι συντάξας γλαφυρὸν ἐπέγραψε μὲν αὐτὸ Περὶ Πυθαγορικῶν ἀριθμῶν, ἀπ' ἀρχῆς δὲ μέχρι ἡμίσιους περὶ τῶν ἐν αὐτοῖς γραμμικῶν ἐμμελέστατα διεξελθὼν πολυγωνίων τε καὶ παντοίων τῶν ἐν ἀριθμοῖς ἐπιπέδων ἅμα καὶ στερεῶν περὶ τε τῶν πέντε σχημάτων, ἃ τοῖς κοσμικοῖς ἀποδίδονται στοιχείοις, ιδιότητος αὐτῶν καὶ πρὸς ἄλληλα κοινότητος, ἀναλογίας τε καὶ ἀντακολουθίας, μετὰ ταῦτα λοιπὸν θάτερον 10 τὸ τοῦ βιβλίου ἥμισυ περὶ δεκάδος ἀντικρυς ποιεῖται φυσικωτάτην αὐτὴν ἀποφαίνων καὶ τελεστικωτάτην τῶν ὄντων, οἷον εἶδός τι τοῖς κοσμικοῖς ἀποτελέσμασι τεχνικόν, ἐφ' ἑαυτῆς ἄλλ' οὐχ ἡμῶν νομισάντων ἢ ὡς ἔτυχε θεμένων ὑπάρχουσιν καὶ παράδειγμα παντελέστατον τῷ τοῦ παντὸς ποιητῇ θεῷ προεκκειμένην. λέγει δὲ τὸν τρόπον τοῦτον περὶ αὐτῆς· ἔστι 15 δὲ τὰ δέκα τέλειος, καὶ ὀρθῶς τε καὶ κατὰ φύσιν εἰς τοῦτον καταντῶμεν παντοίως ἀριθμοῦντες Ἑλληνές τε καὶ πάντες ἄνθρωποι οὐδὲν αὐτοὶ ἐπιτηδεύοντες· πολλὰ γὰρ ἴδια ἔχει, ἃ προσήκει τὸν οὕτω τέλειον ἔχειν, πολλὰ δὲ ἴδια μὲν οὐκ ἔστιν αὐτοῦ, δεῖ δὲ ἔχειν αὐτὰ τέλειον. πρῶτον μὲν οὖν ἄρτιον δεῖ εἶναι, ὅπως ἴσοι ἐνῶσιν οἱ περισσοὶ καὶ ἄρτιοι καὶ μὴ 20 ἑτερομερῶς· ἐπεὶ γὰρ πρότερος αἰὲ ἔστιν ὁ περισσὸς τοῦ ἀρτίου, εἰ μὴ ἄρτιος εἴη ὁ συμπεραίνων, πλεονεκτῆσει ὁ ἕτερος· ἔτι δὲ ἴσους ἔχειν χρὴ τοὺς πρῶτους καὶ ἀσυνθέτους καὶ τοὺς δευτέρους καὶ συνθέτους· ὁ δὲ δέκα ἔχει ἴσους, καὶ οὐδεὶς ἂν ἄλλος ἐλάσσων τῶν δέκα τοῦτο ἔπαθεν ἀριθμὸς, πλείων δὲ τάχα [καὶ γὰρ ὁ ιβ' καὶ ἄλλοι τινές], ἀλλὰ πυθμὴν 25 αὐτῶν ὁ δέκα· καὶ πρῶτος τοῦτο ἔχων καὶ ἐλάχιστος τῶν ἐχόντων τέλος τι ἔχει, καὶ ἰδίον πως αὐτοῦ τοῦτο γέγονε τὸ ἐν πρώτῳ αὐτῷ ἴσους ἀσυνθέτους τε καὶ συνθέτους ὄφθαι, ἔχων τε τοῦτο ἔχει πάλιν καὶ τοὺς πολλαπλασίους καὶ τοὺς ὑποπολλαπλασίους, ὧν εἰσι πολλαπλάσιοι· ἔχει

μὲν γὰρ ὑποπολλαπλασίους τοὺς μέχρι πέντε, οἱ δὲ ἀπὸ τῶν ἕξ μέχρι
 30 τῶν δέκα οἱ πολλαπλάσιοι αὐτῶν· ἐπεὶ δὲ τὰ ἑπτὰ οὐδενός, ἑξαιρετέον
 καὶ τὰ τέσσαρα ὡς πολλαπλάσια τοῦ δύο, ὥστε ἴσους εἶναι πάλιν δεῖ.
 ἔτι πάντες οἱ λόγοι ἐν τῷ ι', ὃ τε τοῦ ἴσου καὶ τοῦ μεῖζονος καὶ τοῦ
 ἐλάττονος καὶ τοῦ ἐπιμορίου καὶ τῶν λοιπῶν εἰδῶν ἐν αὐτῷ, καὶ οἱ
 γραμμικοὶ <καὶ> οἱ ἐπίπεδοι καὶ οἱ στερεοί· τὸ μὲν γὰρ ἐν στιγμῇ, τὰ δὲ
 35 δύο γραμμῇ, τὰ δὲ τρία τρίγωνον, τὰ δὲ τέσσαρα πυραμῖς· ταῦτα δὲ
 πάντα ἐστὶ πρῶτα καὶ ἀρχαὶ τῶν καθ' ἕκαστον ὁμογενῶν. καὶ ἀναλογιῶν
 δὲ πρώτη αὕτη ἐστὶν ἡ ἐν αὐτοῖς ὀφθεῖσα ἡ τὸ ἴσον μὲν ὑπερέχουσα,
 τέλος δὲ ἔχουσα ἐν τοῖς δέκα. ἐν τε ἐπιπέδοις καὶ στερεοῖς πρῶτά ἐστι
 ταῦτα· στιγμῇ γραμμῇ τρίγωνον πυραμῖς· ἔχει δὲ ταῦτα τὸν τῶν δέκα
 40 ἀριθμὸν καὶ τέλος ἴσχει. τετράς μὲν γὰρ ἐν πυραμίδος γωνίαις ἢ βάσεσιν,
 ἑξὰς δὲ ἐν πλευραῖς, ὥστε δέκα· τετράς δὲ πάλιν ἐν στιγμῇ καὶ γραμμῇ
 διαστήμασι καὶ πέρασιν, ἑξὰς δὲ ἐν τριγώνου πλευραῖς καὶ γωνίαις, ὥστε
 πάλιν δέκα. καὶ μὴν καὶ ἐν τοῖς σχήμασι κατ' ἀριθμὸν σκεπτομένῳ
 συμβαίνει· πρῶτον γὰρ ἐστὶ τρίγωνον τὸ ἰσοπλευρον, ὃ ἔχει μίαν πῶς
 45 γραμμὴν καὶ γωνίαν· λέγω δὲ μίαν, διότι ἴσας ἔχει· ἄσχιστον γὰρ
 αἰεὶ καὶ ἐνοειδὲς τὸ ἴσον· δεύτερον δὲ τὸ ἡμιτετράγωνον· μίαν γὰρ ἔχον
 παραλλαγὴν γραμμῶν καὶ γωνιῶν ἐν δυάδι ὁράται· τρίτον δὲ τὸ τοῦ
 ἰσοπλεύρου ἡμισυ τὸ καὶ ἡμιτρίγωνον· πάντως γὰρ ἄνισον καθ' ἕκαστον,
 τὰ δὲ πάντα αὐτοῦ τρία ἐστίν. καὶ ἐπὶ τῶν στερεῶν εὐρίσκουσιν ἂν ἄχρι
 50 τῶν τεττάρων προῖων τὸ τοιοῦτο, ὥστε δεκάδος καὶ οὕτως ψαύει· γίνεται
 γὰρ πῶς ἡ μὲν πρώτη πυραμῖς μίαν πῶς γραμμὴν τε καὶ ἐπιφάνειαν ἐν
 ἰσότητι ἔχουσα, ἐπὶ τοῦ ἰσοπλεύρου ἰσταμένη· ἡ δὲ δευτέρα δύο, ἐπὶ
 τετραγώνου ἐγγεγεμένη, μίαν παραλλαγὴν ἔχουσα, παρὰ τῆς ἐπὶ τῆς
 βάσεως γωνίας ὑπὸ τριῶν ἐπιπέδων περιεχομένη, τὴν κατὰ κορυφὴν
 55 ὑπὸ τεττάρων συγκλειομένη, ὥστε ἐκ τούτου δυάδι ἐοικέναι· ἡ δὲ τρίτη
 τριάδι, ἐπὶ ἡμιτετραγώνου βεβηκυῖα καὶ σὺν τῇ ὀφθείσῃ μιᾷ ὡς ἐν ἐπιπέδῳ
 τῇ ἡμιτετραγώνῳ ἔτι καὶ ἄλλην ἔχουσα διαφορὰν τὴν τῆς κορυφαίας
 γωνίας, ὥστε τριάδι ἂν ὁμοιοῖτο, πρὸς ὀρθὰς τὴν γωνίαν ἔχουσα τῇ τῆς
 βάσεως μέσῃ πλευρᾷ· τετράδι δὲ ἡ τετάρτη κατὰ ταῦτά, ἐπὶ ἡμιτριγώνῳ
 60 βάσει συνισταμένη, ὥστε τέλος ἐν τοῖς δέκα λαμβάνειν τὰ λεχθέντα. τὰ
 αὐτὰ δὲ καὶ ἐν τῇ γενέσει· πρώτη μὲν γὰρ ἀρχὴ εἰς μέγεθος στιγμῇ,
 δευτέρα γραμμῇ, τρίτη ἐπιφάνεια, τέταρτον στερεόν.

1 ὁ Πωτώνης Lang: ὁ Ποτώνης Harles (in Fabricius, *Bibl. Gr.*, III, p. 188):
 ὑποτάνης M || 2 Ἀκαδημίας M: Ἀκαδημείας Lang || πρὸ Boeckh, *Philolaos*,
 p. 138, n. 1: παρὰ M || Ξενοκράτου M: Ξενοκράτους Ast || ἐκ τῶν M: excised by
 Ast || ἑξαίρετως M: ἑξαίρετου p || 5 αὐτοῖς Ast: αὐτῷ M: αὐτῷ p || 6 ἐμμελέστατα
 Ast: ἐκμελέστατα M || 6-7 πολυγωνίων . . . στερεῶν Ast: πολυγωνίοις τε καὶ
 παντοίοις τοῖς ἐν ἀριθμοῖς ἐπιπέδοις ἅμα καὶ στερεοῖς M || 7 τε Ast: τι M ||
 8 ἰδιότητος M: ἰδιότητός <τε> or ἰδιότητος [αὐτῶν] Zeller, II, i, p. 1008, n. 1:

ιδιότητός <τ> Lang || 8-9 καὶ πρὸς ἄλληλα κοινότητος Tannery: πρὸς ἄλληλα καὶ κοινότητος M || 9 ἀναλογίας M: <περὶ> ἀναλογίας Tannery || ἀντακολουθίας M: ἀνακολουθίας Ast || 11-12 τοῖς . . . ἀποτελέσμασι M: τῶν κοσμικῶν ἀποτελεσμάτων Ast || 12 ἐφ' Cherniss: ἀφ' M || 13 θεμένων M: ἢ ἤθελεν Ast: θεμέλιον Diels || ὑπάρχουσιν Diels: ὑπάρχουσα M || 14 προεκκειμένην Diels: προεκκειμένη M || 15 τὰ δέκα M: ὁ δέκα Usener, *Kl. Schr.*, I, p. 203 || τέλειος M: τέλειος <ἀριθμός> Diels || 18 πολλὰ . . . τέλειον M: excised by Ast || αὐτὰ τέλειον M: καὶ τὸν τέλειον Usener, *Kl. Schr.*, I, p. 203: τέλειον <ὄντα> de Falco (in his crit. app.) || 19 first καὶ M: <τε> καὶ Ast || 20 ἑτερομερῶς M: ἑτερομερεῖς Ast || 21 ἔτι Lang: εἶτα Diels: εἰ M || 21-22 ἔχειν χρῆ M: ἔχει, χρῆ Ast || 24 καὶ . . . τινές excised by Tannery || 25 ὁ Ast: αἱ M || 26 αὐτοῦ M: αὐτὰ P: αὐτὸ Ast || 27 πάλιν M: πάλιν <ἴσους> Lang || 29 οἱ Lang: τοὺς M || 30 δέκα edd.: ἰ' M || οἱ πολλαπλάσιοι M: [οἱ] πολλαπλάσιους Ast || ἐπτά NF: ζ' MLBP || 31 τέσσαρα NF: δ' MALBP || δύο de Falco: β' MA || δεῖ MA: excised by Lang || 32 ἔτι MA: ἔτι <δὲ> Lang || 34 first καὶ Lang: om. MA || ἐν de Falco: α' MA || 35 τέσσαρα de Falco: δ' MA || 37 τὸ ἴσον M: ἴσον A: τὸν ἴσον P: τῷ ἴσῳ Ast || 41 στιγμῆς καὶ γραμμῆς Ast: στιγμή καὶ γραμμῇ MA || 42 διαστήμασι Ast: διαστήματι MA || 43 σκεπτομένῳ MA: σκεπτομένῳ <ταῦτό> Lang || 49 τὰ δὲ πάντα Lang (in crit. app.): τὸ δὲ πᾶν Ast: τὸ δὲ πάντῃ M || 50 προῖων MA: προῖον Lang || γίνεσθαι MA: τριάς p, Ast: μονάς Tannery || 52-53 ἔχουσα . . . ἔχουσα A: ἔχουσα M || 54 τὴν MA: τὴν <δὲ> Lang || 58 γωνίας Lang: γωνίαν MA || 59 ταῦτά Lang: ταῦτα MA || ἡμιτετριγώνῳ Tannery: ἡμιτετραγώνῳ MA

29

a. Aristotle, *Metaphysics* 1028 B 15-27

Δοκεῖ δὲ τισι τὰ τοῦ σώματος πέρατα, οἷον ἐπιφάνεια καὶ γραμμὴ καὶ στιγμή καὶ μονάς, εἶναι οὐσίαι, καὶ μᾶλλον ἢ τὸ σῶμα καὶ τὸ στερεόν· ἔτι παρὰ τὰ αἰσθητὰ οἱ μὲν οὐκ οἴονται εἶναι οὐδὲν τοιοῦτον, οἱ δὲ πλείω καὶ μᾶλλον, ὄντα ἄτδια, ὥσπερ Πλάτων τά τε εἶδη καὶ τὰ μαθηματικά
 5 δύο οὐσίας, τρίτην δὲ τὴν τῶν αἰσθητῶν σωμάτων οὐσίαν, Σπεύσιππος δὲ καὶ πλείους οὐσίας ἀπὸ τοῦ ἐνὸς ἀρξάμενος, καὶ ἀρχὰς ἐκάστης οὐσίας, ἄλλην μὲν ἀριθμῶν ἄλλην δὲ μεγεθῶν, ἔπειτα ψυχῆς· καὶ τοῦτον δὴ τὸν τρόπον ἐπεκτείνει τὰς οὐσίας. ἔνιοι δὲ τὰ μὲν εἶδη καὶ τοὺς ἀριθμοὺς τὴν αὐτὴν ἔχειν φασὶ φύσιν, τὰ δὲ ἄλλα ἐχόμενα, γραμμάς καὶ ἐπίπεδα, μέχρι
 10 πρὸς τὴν τοῦ οὐρανοῦ οὐσίαν καὶ τὰ αἰσθητά.

6 first καὶ EJT Ascl.^c: om. A^b

b. Pseudo-Alexander, *In Metaph.*, pp. 462, 34-463, I (on 1028 B 21-24)

Σπεύσιππος δὲ ὁ τούτου μαθητῆς καὶ πλείω τῶν τριῶν ἔλεγεν εἶναι τὰς οὐσίας τὰς νοητάς, πρώτῃ μὲν τὸ αὐτοέν, ἄλλην δὲ τὴν τῶν ἀριθμῶν ἀρχήν, ἄλλην τὴν τῶν μεγεθῶν, καὶ ἄλλην τὴν τῆς ψυχῆς· καὶ οὕτως ἐπεκτείνει εἰς πλῆθος τὰ γένη τῶν οὐσιῶν.

I τούτου, sc. Plato's

c. Asclepius, *In Metaph.*, pp. 377, 34-378, 3 (on 1028 B 2 ff.)

‘Ομοίως καὶ οἱ περὶ Σπεύσιππον καὶ Ξενοκράτην. καὶ ὁ μὲν Σπεύσιππος
πολλὰς ἔλεγεν εἶναι οὐσίας· ἄλλην γὰρ οὐσίαν ἔλεγεν εἶναι μεγεθῶν καὶ
ἄλλην ἀριθμῶν, καὶ ἐπὶ πάντων τῶν ὁμοίων, καὶ πάλιν ἄλλην οὐσίαν
νοῦ καὶ ἄλλην ψυχῆς, καὶ ἄλλην σημείου καὶ ἄλλην γραμμῆς καὶ ἄλλην
5 ἐπιφανείας, ἐπειδὴ, φησί, διαφόρως ἐδόξασαν οἱ πρὸ ἡμῶν.

2 second εἶναι om. D

d. Asclepius, *In Metaph.*, p. 379, 12-15 (on 1028 B 21-24)

Σπεύσιππος δὲ καὶ πλείους οὐσίας ὑποτίθεται ἀπὸ τοῦ ἐνὸς ἀρξά-
μενος, καὶ ἀρχὰς καὶ οὐσίας· ἄλλην γὰρ οὐσίαν λέγει εἶναι τῶν ἀριθμῶν
καὶ ἄλλην τῶν μεγεθῶν καὶ ἄλλην ψυχῆς, καὶ οὕτως ἐπεκτείνει τὰς οὐσίας.

3 οὕτως Tarán: <διὰ> τούτων Lang: τούτων MSS

30

Aristotle, *Metaphysics* 1075 B 37-1076 A 4

Οἱ δὲ λέγοντες τὸν ἀριθμὸν πρῶτον τὸν μαθηματικὸν καὶ οὕτως αἰεὶ
ἄλλην ἐχομένην οὐσίαν καὶ ἀρχὰς ἐκάστης ἄλλας, ἐπεισοδιῶδη τὴν τοῦ
παντὸς οὐσίαν ποιοῦσιν (οὐδὲν γὰρ ἢ ἐτέρα τῇ ἐτέρᾳ συμβάλλεται οὐσα
ἢ μὴ οὐσα) καὶ ἀρχὰς πολλὰς· τὰ δὲ ὄντα οὐ βούλεται πολιτεύεσθαι
5 κακῶς. ‘οὐκ ἀγαθὸν πολυκοιρανίῃ· εἰς κοίρανος ἔστω.’

5 ἔστω E², Ascl.^c, Proclus: om. E¹JA^bΓ and pseudo-Alexander

31

Aristotle, *Metaphysics* 1069 A 30-36

Οὐσίαι δὲ τρεῖς, μία μὲν αἰσθητή — ἥς ἢ μὲν ἀτδῖος ἢ δὲ φθαρτή, ἣν
πάντες ὁμολογοῦσιν, οἷον τὰ φυτὰ καὶ τὰ ζῷα [ἢ δ’ ἀτδῖος] — ἥς ἀνάγκη
τὰ στοιχεῖα λαβεῖν, εἴτε ἕν εἴτε πολλά· ἄλλη δὲ ἀκίνητος, καὶ ταύτην
φασὶ τινες εἶναι χωριστήν, οἱ μὲν εἰς δύο διαιροῦντες, οἱ δὲ εἰς μίαν
5 φύσιν τιθέντες τὰ εἶδη καὶ τὰ μαθηματικά, οἱ δὲ τὰ μαθηματικά μόνον
τούτων.

1-2 ἥς . . . ὁμολογοῦσιν] ἣν πάντες ὁμολογοῦσιν, ἥς ἢ μὲν φθαρτή pseudo-Alex-
ander: ἣν πάντες ὁμολογοῦσιν, ἥς ἢ μὲν ἀτδῖος ἢ δὲ φθαρτή Themistius || 2 ἢ δ’
ἀτδῖος om. by Alexander (in Averroes) and Themistius: excised by Freudent-
thal: extant in EJA^bΓ, pseudo-Alexander, and, with γράφεται, Alexander
(in Averroes) || 3 καὶ A^b and pseudo-Alexander: om. EJΓ || 5 μαθηματικά
οἱ δὲ τὰ A^bΓ, pseudo-Alexander: μαθηματικά οἱ δὲ J (in marg.): om. E ||
second μαθηματικά] μαθητικά J

32

Aristotle, *Metaphysics* 1076 A 16-23 and 32-37

Δύο δ' εἰσὶ δόξαι περὶ τούτων· τὰ τε γὰρ μαθηματικά φασιν οὐσίας
εἶναι τινες, οἷον ἀριθμούς καὶ γραμμάς καὶ τὰ συγγενῇ τούτοις, καὶ
πάλιν τὰς ιδέας. ἐπεὶ δὲ οἱ μὲν δύο ταῦτα γένη ποιοῦσι, τὰς τε ιδέας καὶ
τοὺς μαθηματικούς ἀριθμούς, οἱ δὲ μίαν φύσιν ἀμφοτέρων, ἕτεροι δὲ τινες
5 τὰς μαθηματικὰς μόνον οὐσίας εἶναι φασί, σκεπτέον πρῶτον μὲν περὶ τῶν
μαθηματικῶν, ἀνάγκη δ', εἴπερ ἔστι τὰ μαθηματικά, ἡ
ἐν τοῖς αἰσθητοῖς εἶναι αὐτὰ καθάπερ λέγουσί τινες, ἡ κεχωρισμένα τῶν
αἰσθητῶν (λέγουσι δὲ καὶ οὕτω τινές)· ἡ εἰ μηδετέρως, ἡ οὐκ εἰσὶν ἡ
ἄλλον τρόπον εἰσὶν· ὥσθ' ἡ ἀμφισβήτησις ἡμῖν ἔσται οὐ περὶ τοῦ εἶναι
10 ἀλλὰ περὶ τοῦ τρόπου.

33

Aristotle, *Metaphysics* 1080 B 11-17 and 23-30

Οἱ μὲν οὖν ἀμφοτέρους φασὶν εἶναι τοὺς ἀριθμούς, τὸν μὲν ἔχοντα τὸ
πρότερον καὶ ὕστερον τὰς ιδέας, τὸν δὲ μαθηματικὸν παρὰ τὰς ιδέας
καὶ τὰ αἰσθητά, καὶ χωριστοὺς ἀμφοτέρους τῶν αἰσθητῶν· οἱ δὲ τὸν
μαθηματικὸν μόνον ἀριθμὸν εἶναι, τὸν πρῶτον τῶν ὄντων, κεχωρισμένον
5 τῶν αἰσθητῶν. καὶ οἱ Πυθαγόρειοι δ' ἓνα, τὸν μαθηματικόν, πλὴν οὐ
κεχωρισμένον ὁμοίως δὲ καὶ περὶ τὰ μήκη καὶ περὶ τὰ ἐπίπεδα
καὶ περὶ τὰ στερεά. οἱ μὲν γὰρ ἕτερα τὰ μαθηματικά καὶ τὰ μετὰ τὰς
ιδέας· τῶν δὲ ἄλλως λεγόντων οἱ μὲν τὰ μαθηματικά καὶ μαθηματικῶς
λέγουσιν, ὅσοι μὴ ποιοῦσι τὰς ιδέας ἀριθμούς μηδὲ εἶναι φασιν ιδέας, οἱ
10 δὲ τὰ μαθηματικά, οὐ μαθηματικῶς δέ· οὐ γὰρ τέμνεσθαι οὔτε μέγεθος
πᾶν εἰς μεγέθη, οὔθ' ὅποιασούν μονάδας δυάδα εἶναι.

4 τὸν] Ross would excise it: Jaeger proposes <καὶ τοῦ>τον || κεχωρισμένον E³Γ,
pseudo-Alexander: κεχωρισμένων E¹JA^b

34

Aristotle, *Metaphysics* 1083 A 20-B 1

Ἀλλὰ μὴν οὐδ' ὥς ἕτεροί τινες λέγουσι περὶ τῶν ἀριθμῶν λέγεται
καλῶς. εἰσὶ δ' οὗτοι ὅσοι ιδέας μὲν οὐκ οἶονται εἶναι οὔτε ἀπλῶς οὔτε
ὥς ἀριθμούς τινας οὐσας, τὰ δὲ μαθηματικά εἶναι καὶ τοὺς ἀριθμούς
πρώτους τῶν ὄντων, καὶ ἀρχὴν αὐτῶν εἶναι αὐτὸ τὸ ἓν. ἄτοπον γὰρ τὸ
5 ἐν μὲν εἶναι τι πρῶτον τῶν ἐνῶν, ὥσπερ ἐκεῖνοί φασί, δυάδα δὲ τῶν
δυάδων μή, μηδὲ τριάδα τῶν τριάδων· τοῦ γὰρ αὐτοῦ λόγου πάντα ἐστίν.
εἰ μὲν οὖν οὕτως ἔχει τὰ περὶ τὸν ἀριθμὸν καὶ θήσει τις εἶναι τὸν μαθη-

ματικὸν μόνον, οὐκ ἔστι τὸ ἐν ἀρχῇ (ἀνάγκη γὰρ διαφέρειν τὸ ἐν τῷ
 τοιοῦτο τῶν ἄλλων μονάδων· εἰ δὲ τοῦτο, καὶ δυάδα τινὰ πρώτην τῶν
 10 δυάδων, ὁμοίως δὲ καὶ τοὺς ἄλλους ἀριθμοὺς τοὺς ἐφεξῆς)· εἰ δὲ ἔστι
 τὸ ἐν ἀρχῇ, ἀνάγκη μᾶλλον ὥσπερ Πλάτων ἔλεγεν ἔχειν τὰ περὶ τοὺς
 ἀριθμοὺς, καὶ εἶναι δυάδα πρώτην καὶ τριάδα, καὶ οὐ συμβλητοὺς εἶναι
 τοὺς ἀριθμοὺς πρὸς ἀλλήλους. ἂν δ' αὖ πάλιν τις τιθῇ ταῦτα, εἴρηται ὅτι
 ἀδύνατα πολλὰ συμβαίνει. ἀλλὰ μὴν ἀνάγκη γε ἢ οὕτως ἢ ἐκείνως ἔχειν,
 15 ὥστ' εἰ μηδετέρως, οὐκ ἂν ἐνδέχοιτο εἶναι τὸν ἀριθμὸν χωριστόν.

3 μαθηματικά] μαθητικά A^b || 12 δυάδα A^b, pseudo-Alexander^c: τινὰ δυάδα E:
 τὴν δυάδα J

35

Aristotle, *Metaphysics* 1085 B 36-1086 A 5

Ἔτι δὲ τὸ διαφωνεῖν τοὺς τρόπους περὶ τῶν ἀριθμῶν σημεῖον ὅτι τὰ
 πράγματα αὐτὰ οὐκ ὄντα ἀληθῆ παρέχει τὴν ταραχὴν αὐτοῖς. οἱ μὲν
 γὰρ τὰ μαθηματικά μόνον ποιοῦντες παρὰ τὰ αἰσθητά, ὀρῶντες τὴν
 περὶ τὰ εἶδη δυσχερείαν καὶ πλάσιν, ἀπέστησαν ἀπὸ τοῦ εἰδητικοῦ ἀριθμοῦ
 5 καὶ τὸν μαθηματικὸν ἐποίησαν· οἱ δὲ κτλ.

1 τρόπους E J Γ, pseudo-Alexander (γράφεται): πρώτους A^b, pseudo-Alexander:
 τόπους Syrianus¹ || 2 αὐτὰ] ταῦτα J A^b, Syrianus¹: om. pseudo-Alexander^c

36

Aristotle, *Metaphysics* 1090 A 2-B 5

Ἐπιστήσσειε δ' ἂν τις τὴν σκέψιν καὶ περὶ τῶν ἀριθμῶν πόθεν δεῖ
 λαβεῖν τὴν πίστιν ὡς εἰσίν. τῷ μὲν γὰρ ἰδέας τιθεμένῳ παρέχονται τιν'
 αἰτίαν τοῖς οὖσιν, εἴπερ ἕκαστος τῶν ἀριθμῶν ἰδέα τις ἢ δ' ἰδέα τοῖς
 ἄλλοις αἰτία τοῦ εἶναι ὃν δὴ ποτε τρόπον (ἔστω γὰρ ὑποκείμενον αὐτοῖς
 5 τοῦτο)· τῷ δὲ τοῦτον μὲν τὸν τρόπον οὐκ οἰομένῳ διὰ τὸ τὰς ἐνούσας
 δυσχερείας ὁρᾶν περὶ τὰς ἰδέας ὥστε διὰ γε ταῦτα μὴ ποιεῖν ἀριθμούς,
 ποιοῦντι δὲ ἀριθμὸν τὸν μαθηματικόν, πόθεν τε χρὴ πιστεῦσαι ὡς ἔστι
 τοιοῦτος ἀριθμός, καὶ τί τοῖς ἄλλοις χρήσιμος; οὐθενὸς γὰρ οὔτε φησὶν
 ὁ λέγων αὐτὸν εἶναι, ἀλλ' ὡς αὐτὴν τινὰ λέγει καθ' αὐτὴν φύσιν οὔσαν,
 10 οὔτε φαίνεται ὢν αἷτιος· τὰ γὰρ θεωρήματα τῶν ἀριθμητικῶν πάντα καὶ
 κατὰ τῶν αἰσθητῶν ὑπάρξει, καθάπερ ἐλέχθη.

Οἱ μὲν οὖν τιθέμενοι τὰς ἰδέας εἶναι, καὶ ἀριθμούς αὐτὰς εἶναι, <τῷ>
 κατὰ τὴν ἔκθεσιν ἐκάστου παρὰ τὰ πολλὰ λαμβάνειν [τὸ] ἐν τι ἑκάστον
 πειρῶνται γε λέγειν πως διὰ τί ἔστιν, οὐ μὴν ἀλλὰ ἐπεὶ οὔτε ἀναγκαῖα
 15 οὔτε δυνατὰ ταῦτα, οὐδὲ τὸν ἀριθμὸν διὰ γε ταῦτα εἶναι λεκτέον· οἱ δὲ
 Πυθαγόρειοι διὰ τὸ ὁρᾶν πολλὰ τῶν ἀριθμῶν πάθη ὑπάρχοντα τοῖς

αἰσθητοῖς σώμασιν, εἶναι μὲν ἀριθμοὺς ἐποίησαν τὰ ὄντα, οὐ χωριστοὺς δέ, ἀλλ' ἐξ ἀριθμῶν τὰ ὄντα· διὰ τί δέ; ὅτι τὰ πάθη τὰ τῶν ἀριθμῶν ἐν ἀρμονίᾳ ὑπάρχει καὶ ἐν τῷ οὐρανῷ καὶ ἐν πολλοῖς ἄλλοις. τοῖς δὲ τὸν
 20 μαθηματικὸν μόνον λέγουσιν εἶναι ἀριθμὸν οὐθὲν τοιοῦτον ἐνδέχεται λέγειν κατὰ τὰς ὑποθέσεις, ἀλλ' ὅτι οὐκ ἔσονται αὐτῶν αἱ ἐπιστῆμαι ἐλέγετο. ἡμεῖς δὲ φαμεν εἶναι, καθάπερ εἶπομεν πρότερον. καὶ δῆλον ὅτι οὐ κεχώρι-
 25 σται τὰ μαθηματικά· οὐ γὰρ ἂν κεχωρισμένων τὰ πάθη ὑπῆρχεν ἐν τοῖς σώμασιν. οἱ μὲν οὖν Πυθαγόρειοι κατὰ μὲν τὸ τοιοῦτον οὐθενὶ ἔνοχοι εἰσιν, κατὰ μέντοι τὸ ποιεῖν ἐξ ἀριθμῶν τὰ φυσικὰ σώματα, ἐκ μὴ ἐχόντων βάρους μὴδὲ κουφότητα ἔχοντα κουφότητα καὶ βάρος, εἰκόνασι περὶ ἄλλου οὐρανοῦ λέγειν καὶ σωμάτων ἀλλ' οὐ τῶν αἰσθητῶν· οἱ δὲ χωριστὸν ποιῶντες, ὅτι ἐπὶ τῶν αἰσθητῶν οὐκ ἔσται τὰ ἀξιώματα, ἀληθῆ δὲ τὰ λεγόμενα καὶ σαίνει τὴν ψυχὴν, εἶναί τε ὑπολαμβάνουσι καὶ χωριστὰ
 30 εἶναι· ὁμοίως δὲ καὶ τὰ μεγέθη τὰ μαθηματικά. δῆλον οὖν ὅτι καὶ ὁ ἐναντιούμενος λόγος τάναντία ἔρεϊ, καὶ ὁ ἄρτι ἡπορήθη λυτέον τοῖς οὕτω λέγουσι, διὰ τί οὐδαμῶς ἐν τοῖς αἰσθητοῖς ὑπαρχόντων τὰ πάθη ὑπάρχει αὐτῶν ἐν τοῖς αἰσθητοῖς.

9 αὐτὸν] αὐτὸν <αἰτίων> Jaeger || ὥς] om. E || 12-13 τῷ . . . ἐν] τῷ κατὰ τὴν ἐκθεσιν ἕκαστον παρὰ τὰ πολλὰ λαμβάνειν, ἐν Joachim || 12 τῷ added by Ross on the basis of Bessarion's transl.: τὸ Maier || 13 τὴν] τὸ Bonitz || λαμβάνειν τὸ ἐν] λαμβάνοντες ἐν Bullinger || τὸ excised by Maier and probably om. by pseudo-Alexander^p || 14 πῶς pseudo-Alexander^p, Bullinger: πῶς EJA^bΓ: πῶς καὶ some later MSS || 16 τοῖς] <ἐν> τοῖς Jaeger || 18-19 ἐν ἀρμονίᾳ E: ἐν τῇ ἀρμονίᾳ pseudo-Alexander^c: ἐναρμόνια JA^bΓ || 26 μὴδὲ JA^b, pseudo-Alexander^c: οὐδὲ E, Syrianus¹ || 28-29 ἀληθῆ . . . ψυχὴν] Jaeger unnecessarily postulates a lacuna before or after this phrase, which is a quotation or virtual quotation from Speusippus (cf. comm. *ad loc.* with note 119) || 29 χωριστὰ] χωριστὸν Bonitz || 32 λέγουσι] λύεται JA^bΓ

37

Aristotle, *Metaphysics* 1090 B 13-21

"Ἐτι δὲ ἐπιζητήσκειν ἂν τις μὴ λίαν εὐχερῆς ὦν περὶ μὲν τοῦ ἀριθμοῦ παντὸς καὶ τῶν μαθηματικῶν τὸ μὴθὲν συμβάλλεσθαι ἀλλήλοις τὰ πρότερα τοῖς ὕστερον (μὴ ὄντος γὰρ τοῦ ἀριθμοῦ οὐθὲν ἤττον τὰ μεγέθη ἔσται τοῖς τὰ μαθηματικά μόνον εἶναι φαμένοις, καὶ τούτων μὴ ὄντων ἢ ψυχῇ
 5 καὶ τὰ σώματα τὰ αἰσθητά· οὐκ ἔοικε δ' ἡ φύσις ἐπεισοδιώδης οὕσα ἐκ τῶν φαινομένων, ὥσπερ μοχθηρὰ τραγωδία). τοῖς δὲ τὰς ιδέας τιθεμένοις τοῦτο μὲν ἐκφεύγει κτλ.

4 μόνον] καὶ μόνον J || 5 second τὰ] om. E

38

Aristotle, *Metaphysics* 1092 A 35-B 3

Ἐπεὶ τοίνυν τὸ ἐν ὃ μὲν τῷ πλήθει ὡς ἐναντίον τίθησιν, ὃ δὲ τῷ ἀνίσῳ, ὡς ἴσῳ τῷ ἐνὶ χρώμενος, ὡς ἐξ ἐναντίων εἶη ἂν ὁ ἀριθμός· ἔστιν ἄρα τι ἕτερον ἐξ οὗ ὑπομένοντος καὶ θατέρου ἐστὶν ἢ γέγονεν.

2 ἔστιν] ἔσται Schwegler

39

Aristotle, *Metaphysics* 1087 B 4-9 and 26-33

Οἱ δὲ τὸ ἕτερον τῶν ἐναντίων ὕλην ποιοῦσιν, οἱ μὲν τῷ ἐνὶ [τῷ ἴσῳ] τὸ ἄνισον, ὡς τοῦτο τὴν τοῦ πλήθους οὔσαν φύσιν, οἱ δὲ τῷ ἐνὶ τὸ πλήθος (γεννῶνται γὰρ οἱ ἀριθμοὶ τοῖς μὲν ἐκ τῆς τοῦ ἀνίσου δυάδος, τοῦ μεγάλου καὶ μικροῦ, τῷ δ' ἐκ τοῦ πλήθους, ὑπὸ τῆς τοῦ ἐνὸς δὲ οὐσίας ἀμφοῖν)
5 οἱ δὲ τὸ ἕτερον καὶ τὸ ἄλλο πρὸς τὸ ἐν ἀντιτιθέασιν, οἱ δὲ πλήθος καὶ τὸ ἐν. εἰ δὲ ἐστὶν, ὥσπερ βούλονται, τὰ ὄντα ἐξ ἐναντίων, τῷ δὲ ἐνὶ ἢ οὐθὲν ἐναντίον ἢ εἴπερ ἄρα μέλλει, τὸ πλήθος, τὸ δ' ἄνισον τῷ ἴσῳ καὶ τὸ ἕτερον τῷ ταύτῳ καὶ τὸ ἄλλο αὐτῷ, μάλιστα μὲν οἱ τὸ ἐν τῷ πλήθει ἀντιτιθέντες ἔχονταί τινος δόξης, οὐ μὴν οὐδ' οὔτοι ἰκανῶς· ἔσται γὰρ
10 τὸ ἐν ὀλίγον· πλήθος μὲν γὰρ ὀλιγότητι τὸ δὲ πολὺ τῷ ὀλίγῳ ἀντίκειται.

1 τῷ ἴσῳ excised by Jaeger: καὶ τῷ ἴσῳ J^a || 2 οἱ A^bΓ, pseudo-Alexander^p: ὁ E J || τὸ] ὁ J¹ || 7 εἴπερ ἄρα μέλλει E and perhaps pseudo-Alexander^p: εἴπερ ἀμέλει JA^bΓ || 8 ταύτῳ EA^b, pseudo-Alexander^c: αὐτῷ J || αὐτῷ E J, pseudo-Alexander^c: πρὸς τὸ αὐτῷ A^b

40

Aristotle, *Metaphysics* 1085 B 4-27

Ἔτι πῶς μὲν ἐνδέχεται εἶναι ἐκ τοῦ ἐνὸς καὶ πλήθους τὸν ἀριθμὸν οὐθὲν ἐπιχειρεῖται· ὅπως δ' οὖν λέγουσι ταῦτα συμβαίνει δυσχερῇ ἄπερ καὶ τοῖς ἐκ τοῦ ἐνὸς καὶ ἐκ τῆς δυάδος τῆς ἀορίστου. ὃ μὲν γὰρ ἐκ τοῦ κατηγορουμένου καθόλου γεννᾷ τὸν ἀριθμὸν καὶ οὐ τινὸς πλήθους, ὃ δ'
5 ἐκ τινὸς πλήθους, τοῦ πρώτου δέ (τὴν γὰρ δυάδα πρῶτόν τι εἶναι πλήθος), ὥστε διαφέρει οὐθὲν ὡς εἰπεῖν, ἀλλ' αἱ ἀπορίαι αἱ αὐταὶ ἀκολουθήσουσι, μῆζις ἢ θέσις ἢ κῶσις ἢ γένεσις καὶ ὅσα ἄλλα τοιαῦτα. μάλιστα δ' ἂν τις ἐπιζητήσκειν, εἰ μία ἐκάστη μονάς, ἐκ τίνος ἐστίν· οὐ γὰρ δὴ αὐτό γε τὸ ἐν ἐκάστη. ἀνάγκη δὴ ἐκ τοῦ ἐνὸς αὐτοῦ εἶναι καὶ πλήθους ἢ μορίου
10 τοῦ πλήθους. τὸ μὲν οὖν πληθὸς τι εἶναι φάναι τὴν μονάδα ἀδύνατον, ἀδιαίρετόν γ' οὔσαν· τὸ δ' ἐκ μορίου ἄλλας ἔχει πολλὰς δυσχερείας· ἀδιαίρετόν τε γὰρ ἕκαστον ἀναγκαῖον εἶναι τῶν μορίων (ἢ πλήθος εἶναι

- καὶ τὴν μονάδα διαιρετήν) καὶ μὴ στοιχεῖον εἶναι τὸ ἐν καὶ τὸ πλῆθος (ἡ γὰρ μονὰς ἐκάστη οὐκ ἐκ πλῆθους καὶ ἐνός). ἔτι οὐθὲν ἄλλο ποιεῖ ὁ
 15 τοῦτο λέγων ἄλλ' ἢ ἀριθμὸν ἕτερον· τὸ γὰρ πλῆθος ἀδιαιρέτων ἐστὶν ἀριθμός. ἔτι ζητητέον καὶ περὶ τοὺς οὕτω λέγοντας πότερον ἄπειρος ὁ ἀριθμός ἢ πεπερασμένος. ὑπῆρχε γάρ, ὡς ἔοικε, καὶ πεπερασμένον πλῆθος, ἐξ οὗ αἱ πεπερασμένα μονάδες καὶ τοῦ ἐνός· ἔστι τε ἕτερον αὐτὸ πλῆθος καὶ πλῆθος ἄπειρον· ποῖον οὖν πλῆθος στοιχεῖόν ἐστι καὶ τὸ ἐν;

4 ὁ δ'] οὐδ' E || 6 αἱ αὐταὶ J²Γ, pseudo-Alexander^p: αὐταὶ E J¹A^b || 7 θέσις] σύνθεσις Bywater || ἡ κρᾶσις] in marg. J: om. Γ || 9 δὴ E J²: δ' ἢ J¹A^b || 11 ἀδιαίρετόν] ἀδιόριστόν E || 16 περὶ pseudo-Alexander¹: παρὰ E J A^bΓ: om. pseudo-Alexander^p || 18 ἔστι] ἔτι pseudo-Alexander^c || αὐτὸ] τὸ pseudo-Alexander^c

41

Aristotle, *Metaphysics* 1091 A 12-29

- *Ατοπον δὲ καὶ γένεσιν ποιεῖν ἀιδίῳ ὄντων, μᾶλλον δ' ἐν τι τῶν ἀδυνάτων. οἱ μὲν οὖν Πυθαγόρειοι πότερον οὐ ποιοῦσιν ἢ ποιοῦσι γένεσιν οὐδὲν δεῖ διαστᾶζειν· φανερώς γὰρ λέγουσιν ὡς τοῦ ἐνός συσταθέντος, εἴτ' ἐξ ἐπιπέδων εἴτ' ἐκ χροιάς εἴτ' ἐκ σπέρματος εἴτ' ἐξ ὧν ἀποροῦσιν
 5 εἰπεῖν, εὐθύς τὸ ἔγγιστα τοῦ ἀπείρου ὅτι εἴλκετο καὶ ἐπεραίνετο ὑπὸ τοῦ πέρατος. ἀλλ' ἐπειδὴ κοσμοποιοῦσι καὶ φυσικῶς βούλονται λέγειν, δίκαιον αὐτοὺς ἐξετάζειν τι περὶ φύσεως, ἐκ δὲ τῆς νῦν ἀφεῖναι μεθόδου· τὰς γὰρ ἐν τοῖς ἀκινήτοις ζητοῦμεν ἀρχάς, ὥστε καὶ τῶν ἀριθμῶν τῶν τοιούτων ἐπισκεπτέον τὴν γένεσιν.
 10 Τοῦ μὲν οὖν περιττοῦ γένεσιν οὐ φασιν, ὡς δηλονότι τοῦ ἀρτίου οὔσης γενέσεως· τὸν δ' ἄρτιον πρῶτον ἐξ ἀνίσων τινὲς κατασκευάζουσι τοῦ μεγάλου καὶ μικροῦ ἰσασθέντων. ἀνάγκη οὖν πρότερον ὑπάρχειν τὴν ἀνισότητα αὐτοῖς τοῦ ἰσασθῆναι· εἰ δ' αἰετὶ ἦσαν ἰσασμένα, οὐκ ἂν ἦσαν ἄνισα πρότερον (τοῦ γὰρ αἰετὶ οὐκ ἔστι πρότερον οὐθέν), ὥστε φανερόν ὅτι
 15 οὐ τοῦ θεωρῆσαι ἔνεκεν ποιοῦσι τὴν γένεσιν τῶν ἀριθμῶν.

7 τι] τοὺς pseudo-Alexander: ἐν τῇ Bywater

42

a. Aristotle, *Metaphysics* 1072 B 30-1073 A 3

- *Ὅσοι δὲ ὑπολαμβάνουσιν, ὥσπερ οἱ Πυθαγόρειοι καὶ Σπεύσιππος, τὸ κάλλιστον καὶ ἄριστον μὴ ἐν ἀρχῇ εἶναι, διὰ τὸ καὶ τῶν φυτῶν καὶ τῶν ζώων τὰς ἀρχὰς αἴτια μὲν εἶναι τὸ δὲ καλὸν καὶ τέλειον ἐν τοῖς ἐκ τούτων, οὐκ ὁρθῶς οἴονται. τὸ γὰρ σπέρμα ἐξ ἐτέρων ἐστὶ προτέρων
 5 τελείων, καὶ τὸ πρῶτον οὐ σπέρμα ἐστὶν ἀλλὰ τὸ τέλειον· οἶον πρότερον

ἄνθρωπον ἂν φαίη τις εἶναι τοῦ σπέρματος, οὐ τὸν ἐκ τούτου γενόμενον ἀλλ' ἕτερον ἐξ οὗ τὸ σπέρμα.

5 οἶον E: οἶόν τε J^{1A}^b: ὡς οἶόν τε J²

b. Pseudo-Alexander, *In Metaph.*, p. 699, 28-37

Δειξας ὅτι ὁ θεὸς ἡ πρώτη ἀρχὴ ζῶον αἰδίων ἀριστόν ἐστιν, αἰτιᾶται τοὺς Πυθαγορείους καὶ Σπεύσιππον εἰπόντας ὅτι τὸ κάλλιστον καὶ ἀριστον οὐκ ἔστιν ἐν ἀρχῇ, οὐδὲ δυνατόν λέγειν τὴν ἀρχὴν ἀριστον, διότι τὸ σπέρμα καὶ τὸ καταμήνιον ἀρχαί μὲν εἰσι τῶν ζώων καὶ οὐκ εἰσιν
5 ἀριστα, ἀλλ' ἔστι μᾶλλον ἀριστον τὸ ἐκ τοῦ σπέρματος καὶ τοῦ καταμήνιου γεγονός. οὐκ ὀρθῶς οὖν, φησίν, οἶονται ὅτι τὸ σπέρμα τὸ ἀτελὲς καὶ τὸ καταμήνιον εἰσιν ἀρχαί, ἀλλ' ὁ πατήρ καὶ ἡ μήτηρ, οἵτινες πρὸς τῷ τέλει οἱ εἶναι καὶ πρότεροί εἰσι τοῦ σπέρματος καὶ τοῦ καταμήνιου. ὥστε πρότερός ἐστιν ὁ ἄνθρωπος τοῦ σπέρματος, οὐχ ὁ ἐκ τοῦ σπέρματος
10 γεγονώς, ἀλλ' ὁ πατήρ ἐξ οὗ τὸ σπέρμα.

c. Themistius, *In Metaph. Libr. A Paraphrasis*, p. 24, 24-32

At iam aliqui sunt opinati pulcherrimum et optimum non esse in initio rei, ut secta Pythagoreorum et Speusippus opinati sunt principia animalium et plantarum causas quidem esse, ut sint, pulcherrimum autem et perfectissimum minime esse in semine, sed
5 tempore perfectionis. at non verum est, quod opinantur. nam utilitatem iam habent a radicibus. in eo vero, quod simul habet utrumque, actum, inquam, et potentiam, prior est potentia, simpliciter tamen actus potentiam praecedat, ut homo prior est semine hominis; semen enim ex homine oritur.

2 Speusippus Krische, *Forsch.*, p. 250, n. 1 and Landauer (in his *Index nominum*): Leucippus MSS

d. [Philoponus], *In Metaph.* (Patrizzii's Latin transl.), f. 51v, col. a

Deinde accusat Speusippum dicentem, quod non oporteat dicere, optimum in principiis; principia enim semper imperfecta, potentia cum sint. et solvit rationem. sane, sed principium Socratis Sophroniscus, sed non semen simplex.

1 Speusippum Lang: Leucippum Patrizzii

43

Aristotle, *Metaphysics* 1092 A 11-17

Οὐκ ὀρθῶς δ' ὑπολαμβάνει οὐδ' εἴ τις παρεικάζει τὰς τοῦ ὅλου ἀρχὰς τῇ τῶν ζώων καὶ φυτῶν, ὅτι ἐξ ἀορίστων ἀτελῶν τε αἰεὶ τὰ τελειότερα,

διὸ καὶ ἐπὶ τῶν πρώτων οὕτως ἔχειν φησίν, ὥστε μὴδὲ ὄν τι εἶναι τὸ ἐν αὐτό. εἰσὶ γὰρ καὶ ἐνταῦθα τέλειαι αἱ ἀρχαὶ ἐξ ὧν ταῦτα· ἄνθρωπος γὰρ
5 ἄνθρωπον γενεῖ, καὶ οὐκ ἔστι τὸ σπέρμα πρώτων.

2 τῇ] τι E || τε Ravaisson: δὲ MSS

44

Aristotle, *Metaphysics* 1091 A 29-B 3

Ἐχει δ' ἀπορίαν καὶ εὐπορήσαντι ἐπιτίμησιν πῶς ἔχει πρὸς τὸ ἀγαθὸν καὶ τὸ καλὸν τὰ στοιχεῖα καὶ αἱ ἀρχαί· ἀπορίαν μὲν ταύτην, πότερόν ἐστὶ τι ἐκείνων οἷον βουλόμεθα λέγειν αὐτὸ τὸ ἀγαθὸν καὶ τὸ ἄριστον, ἢ οὐ, ἀλλ' ὑστερογενῇ. παρὰ μὲν γὰρ τῶν θεολόγων ἔοικεν ὁμολογεῖσθαι
5 τῶν νῦν τισίν, οἳ οὐ φασιν, ἀλλὰ προελθούσης τῆς τῶν ὄντων φύσεως καὶ τὸ ἀγαθὸν καὶ τὸ καλὸν ἐμφαίνεσθαι (τοῦτο δὲ ποιοῦσιν εὐλαβούμενοι ἀληθινὴν δυσχέρειαν ἢ συμβαίνει τοῖς λέγουσιν, ὥσπερ ἔνιοι, τὸ ἐν ἀρχῇ· ἔστι δ' ἡ δυσχέρεια οὐ διὰ τὸ τῇ ἀρχῇ τὸ εὖ ἀποδιδόναι ὡς ὑπάρχον, ἀλλὰ διὰ τὸ τὸ ἐν ἀρχῇ καὶ ἀρχὴν ὡς στοιχεῖον καὶ τὸν ἀριθμὸν ἐκ τοῦ
10 ἐνός), κτλ.

1 ἐπιτίμησιν] ἐπιστήμησιν E || 8 εὖ JA^b, pseudo-Alexander^c: ἐν E

45

a. Aristotle, *Metaphysics* 1091 B 22-26 and 30-35

Συμβαίνει γὰρ πολλὴ δυσχέρεια, ἣν ἔνιοι φεύγοντες ἀπειρήκασιν, οἳ τὸ ἐν μὲν ὁμολογοῦντες ἀρχὴν εἶναι πρώτην καὶ στοιχεῖον, τοῦ ἀριθμοῦ δὲ τοῦ μαθηματικοῦ· ἅπασαι γὰρ αἱ μονάδες γίνονται ὅπερ ἀγαθόν τι, καὶ πολλὴ τις εὐπορία ἀγαθῶν ταῦτά τε δὴ συμβαίνει ἄτοπα,
5 καὶ τὸ ἐναντίον στοιχεῖον, εἴτε πλῆθος ὄν εἴτε τὸ ἄνισον καὶ μέγα καὶ μικρόν, τὸ κακὸν αὐτό (διόπερ ὁ μὲν ἔφευγε τὸ ἀγαθὸν προσάπτειν τῷ ἐνὶ ὡς ἀναγκαῖον ὄν, ἐπειδὴ ἐξ ἐναντίων ἢ γένεσις, τὸ κακὸν τὴν τοῦ πλῆθους φύσιν εἶναι· οἳ δὲ λέγουσι τὸ ἄνισον τὴν τοῦ κακοῦ φύσιν)· κτλ.

b. Pseudo-Alexander, *In Metaph.*, p. 823, 9-14

Καὶ πρὸς τοῦτοις εἰ τὸ ἐν ἀγαθόν, τὸ μὴ ἔν, ὃ εἴτε δυάδα εἴτε ἄνισον εἴτε πλῆθος χρὴ καλεῖν, ἔσται κακόν, ἢ ἐξ ἐναντίων, ἐνὸς μὲν τοῦ ἀγαθοῦ, μὴ ἐνός δὲ τοῦ κακοῦ, ἢ γένεσις ἢ τῶν εἰδῶν. ὁ συνεωρακῶς Σπεύσιππος (λέγω δὴ τὸ εἰ τὸ ἐν ἀγαθόν, ἀνάγκη τὸ μὴ ἐν τὸ ὑλικὸν κακὸν εἶναι)
5 ἀπέφυγε καὶ προσάπτειν οὐκ ἠθέλησε τὸ ἀγαθὸν τῷ ἐνί.

c. Syrianus, *In Metaph.*, p. 184, 22-24

Τίς ἐστὶν ὁ φυγών; διὰ τί μάτην ὀνειδίζεται ὁ χρυσοῦς Σπεύσιππος; πῶς δὲ εἶπετο ἐκ τοιούτων ἐναντίων εἶναι τὴν τῶν θείων πραγμάτων ὑπόστασιν;

46

a. Aristotle, *Metaphysics* 1075 A 31-B 1

Ἡμῖν δὲ λύεται τοῦτο εὐλόγως τῷ τρίτον τι εἶναι. οἱ δὲ τὸ ἕτερον τῶν ἐναντίων ὕλην ποιοῦσιν, ὥσπερ οἱ τὸ ἄνισον τῷ ἴσῳ ἢ τῷ ἐνὶ τὰ πολλά. λύεται δὲ καὶ τοῦτο τὸν αὐτὸν τρόπον· ἡ γὰρ ὕλη ἡ μία οὐδενὶ ἐναντίον. ἔτι ἅπαντα τοῦ φαύλου μεθέξει ἕξω τοῦ ἐνός· τὸ γὰρ κακὸν αὐτὸ θάτερον
 5 τῶν στοιχείων. οἱ δ' ἄλλοι οὐδ' ἀρχὰς τὸ ἀγαθὸν καὶ τὸ κακόν· καίτοι ἐν ἅπασιν μάλιστα τὸ ἀγαθὸν ἀρχή. οἱ δὲ τοῦτο μὲν ὀρθῶς ὅτι ἀρχήν, ἀλλὰ πῶς τὸ ἀγαθὸν ἀρχή οὐ λέγουσιν, πότερον ὥς τέλος ἢ ὥς κινήσαν ἢ ὥς εἶδος.

3 ἡ γὰρ] καὶ γὰρ ἡ pseudo-Alexander (γράφεται) || ἡ μία MSS and pseudo-Alexander (γράφεται): ἡμῖν pseudo-Alexander^c || 5 κακόν] καλόν Robin || 6 ἀρχήν] ἀρχή E J Γ

b. Pseudo-Alexander, *In Metaph.*, pp. 717, 37-718, 5

Ἔτι, φησὶν, εἰ ὑπόκειται τὸ κακὸν καὶ πάντα ἐστὶν ἐκ τοῦ κακοῦ, πάντα μεθέξει τοῦ κακοῦ καὶ οὐδὲν ἔσται ἀγαθὸν πλην τοῦ ἐνός, δὲ καθ' αὐτὸ εἶναι ἔλεγον. ἀλλ' οἱ μὲν περὶ Πλάτωνα ἀρχὰς τὸ ἀγαθὸν καὶ τὸ κακὸν ἐτίθεντο, οἱ δὲ ἄλλοι, οἷον οἱ Πυθαγόρειοι, ἐνίστανται φάσκοντες
 5 ὅτι τὸ ἀγαθὸν οὐκ ἔστιν ἀρχή· καὶ πῶς οἱ Πυθαγόρειοι τὸ ἀγαθὸν καὶ ἄριστον ἀρχήν εἶναι οὐκ ἐβούλοντο, εἴρηται ἐν τῷ παρόντι βιβλίῳ ἐξηγουμένοις τὴν λέξιν τὴν ὅσοι δὲ ὑπολαμβάνουσιν ὥσπερ οἱ Πυθαγόρειοι καὶ Σπεύσιππος τὸ κάλλιστον καὶ ἄριστον μὴ ἐν ἀρχῇ εἶναι.'

47

a. Aristotle, *Ethica Nicomachea* 1096 B 5-8

Πιθανώτερον δ' εἰκόασιν οἱ Πυθαγόρειοι λέγειν περὶ αὐτοῦ (sc. τοῦ ἀγαθοῦ), τιθέντες ἐν τῇ τῶν ἀγαθῶν συστοιχίᾳ τὸ ἐν· οἷς δὴ καὶ Σπεύσιππος ἐπακολουθεῖν δοκεῖ. ἀλλὰ περὶ μὲν τούτων ἄλλος ἔστω λόγος· κτλ.
 3 ἔστω] ἔσται K^bM^b

b. Eustratius, *In Eth. Nicom.*, p. 51, 10-18

Λέγοι δ' ἄν, ὅτι τὸ ἐν ἐν τῇ τῶν ἀγαθῶν συστοιχίᾳ οἱ Πυθαγόρειοι τάξαντες παριστῶσι τὴν φύσιν αὐτοῦ τελειωτικὴν τινὰ καὶ σωτήριον. ἕκαστον γὰρ τῶν πραγμάτων ἐν τούτῳ τελειοῦται καὶ ἀγαθύνεται καὶ τηρεῖται, ἐν τῷ μένειν ἐν τῷ ἐνί, ἀσκέδαστον δὲ καὶ ἀδιαίρετον· σκεδασθὲν
 5 δὲ οἴχεται. καὶ τάχα τοῦτο κρίνει Ἀριστοτέλης οἰκειότερον εἶναι λέγειν περὶ τοῦ ἀγαθοῦ καὶ ἰδέαν τίθεσθαι αὐτό. φησὶ δὲ καὶ Σπεύσιππον ἐπακολουθεῖν αὐτοῖς, θεολόγον ὄντα παρ' Ἑλλήσιν. ἀλλὰ πρὸς μὲν τοὺς Πυ-

θαγορείους, φησί, καὶ τὸν Σπεύσιππον οὐκ ἔστιν νῦν ἡμῖν ὁ λόγος ἀλλὰ πρὸς τοὺς τὰς ἰδέας εἰσάγοντας· διὸ τούτους ἀφείλς πρὸς Πλάτωνα τρέπεται.

c. [Heliodorus], *In Eth. Nicom.*, p. 9, 36-39

Οἱ δὲ Πυθαγόρειοι πιθανώτερον εἰκόασι λέγειν περὶ τοῦ ἀγαθοῦ· οὐ γὰρ ἔν ἔλεγον τὸ ἀγαθόν, ἀλλὰ τὸ ἀνάπαλιν τὸ ἐν ἐν τῇ τῶν ἀγαθῶν ἑταξαν συστοιχία, οἷς δὴ καὶ Σπεύσιππος ἀκολουθεῖν δοκεῖ.

48

Proclus, *In Parmenidem*, pp. 38, 32-40, 7

Et ut Speusippus — narrans tamquam placentia antiquis — audit. quid dicit? 'Le unum enim melius ente putantes et a quo le ens, et ab ea que secundum principium habitudine ipsum liberaverunt. existimantes autem quod, si quis le unum ipsum seorsum et solum
5 meditatum, sine aliis, secundum se ipsum ponat, nullum alterum elementum ipsi apponens, nichil utique fiet aliorum, interminabilem dualitatem entium principium induxerunt.' Quare testatur et iste hanc esse antiquorum opinionem de uno, quod ultra ens sursum raptum est et quod post unum interminabilis dualitas.

1 et ut MSS: ut et Klibansky || audit] or audi (-di above the line) C¹ || 2 enim] om. O || ente] ante CV || 3 habitudine] habitudinem O || 4 unum] bonum CV || 5 ponat (i.e. τιθεῖν) Klibansky: suadere (i.e. πείθειν) Λ || 7 induxerunt (i.e. εἰσήγαγον) Klibansky: inducens (i.e. εἰσαγαγών) Λ

49

a. Damascius, *De Principiis*, I, pp. 2, 25-3, 2

Οὐ γὰρ ἐν ὡς ἐλάχιστον, καθάπερ ὁ Σπεύσιππος ἔδοξε λέγειν, ἀλλ' ἐν ὡς πάντα καταπιόν· τῇ γὰρ ἑαυτοῦ ἀπλότητι πάντα συνανέλυσεν, καὶ ἐν τὰ πάντα ἐποίησεν.

2 καταπιόν Kopp: κατὰ τῶν A

b. Anonymous, *In Parmenidem* (Codex Taurinensis F VI 1), I, fol. 91r, 17-24 (Kroll)

οἰκεία οὖν αὕτη πα-
σῶν τῶν ἄλλων προσηγοριῶν τῷ ἐπὶ πᾶ-
σι θεῷ καὶ τ . . . ! περὶ αὐτοῦ . . . σύμ-
φυλος, εἰ μὴ τι<ς> διὰ σμικρότητα ὥσπερ Σπεύ-
5 σιππος καὶ τιμᾶ ανοντ . . αν . . ας δι-
ὰ τὸ πάνυ σμικρὸν καὶ μὴ δ<ικαιρετὸν εἶν>αι

καταφέροιτο ἐπὶ πρᾶγμα ἀλλοτριώτατον τοῦ
θεοῦ ἀκούσας τὸ ἐκ<ν>.

4 μὴ τις Baeumker: MHTE MS || 8 ἀκούσας Usener: AKOUCAI MS

50

Aristotle, *Metaphysics* 1090 B 5-13

Εἰσὶ δέ τινες οἱ ἐκ τοῦ πέρατα εἶναι καὶ ἔσχατα τὴν στιγμὴν μὲν
γραμμῆς, ταύτην δ' ἐπιπέδου, τοῦτο δὲ τοῦ στερεοῦ, οἴονται εἶναι ἀνάγκην
τοιαύτας φύσεις εἶναι. δεῖ δὴ καὶ τοῦτον ὁρᾶν τὸν λόγον, μὴ λίαν ἢ μαλα-
κός. οὔτε γὰρ οὐσίαι εἰσὶ τὰ ἔσχατα ἀλλὰ μᾶλλον πάντα ταῦτα πέρατα
5 (ἐπεὶ καὶ τῆς βαδίσσεως καὶ ὅλως κινήσεως ἔστι τι πέρας· τοῦτ' οὖν
ἔσται τότε τι καὶ οὐσία τις· ἀλλ' ἄτοπον). — οὐ μὲν ἀλλὰ εἰ καὶ εἰσὶ, τῶνδε
τῶν αἰσθητῶν ἔσονται πάντα (ἐπὶ τούτων γὰρ ὁ λόγος εἴρηκεν). διὰ τί
οὖν χωριστὰ ἔσται;

4 ἔσχατα] ἔσχατα <οὔτε χωριστὰ> Jaeger || 6 ἔσται A^b, pseudo-Alexander^p:
ἔστι EJ || ἀλλὰ εἰ] ἀλλ' αἰ E¹J || 8 ἔσται JA^bΓ: ἔστιν E, pseudo-Alexander^c

51

Aristotle, *Metaphysics* 1085 A 31-B 4 and B 27-34

Οἱ μὲν οὖν τὰ μεγέθη γεννῶσιν ἐκ τοιαύτης ὕλης, ἕτεροι δὲ ἐκ τῆς
στιγμῆς (ἡ δὲ στιγμή αὐτοῖς δοκεῖ εἶναι οὐχ ἓν ἀλλ' οἶον τὸ ἓν) καὶ
ἄλλης ὕλης οἷας τὸ πλῆθος, ἀλλ' οὐ πλῆθους· περὶ ὧν οὐδὲν ἤττον συμ-
βαίνει τὰ αὐτὰ ἀπορεῖν. εἰ μὲν γὰρ μία ἡ ὕλη, ταῦτο γραμμὴ καὶ ἐπίπεδον
5 καὶ στερεόν (ἐκ γὰρ τῶν αὐτῶν τὸ αὐτὸ καὶ ἓν ἔσται). εἰ δὲ πλείους αἱ
ὕλαι καὶ ἑτέρα μὲν γραμμῆς ἑτέρα δὲ τοῦ ἐπιπέδου καὶ ἄλλη τοῦ στερεοῦ,
ἦτοι ἀκολουθοῦσιν ἀλλήλαις ἢ οὐ, ὥστε ταῦτά συμβήσεται καὶ οὕτως· ἡ
γὰρ οὐχ ἔξει τὸ ἐπίπεδον γραμμὴν ἢ ἔσται γραμμὴ ὁμοίως
δὲ καὶ περὶ στιγμῆς ἂν τις ζητήσῃ καὶ τοῦ στοιχείου ἐξ οὗ ποιοῦσι τὰ
10 μεγέθη. οὐ γὰρ μία γε μόνον στιγμή ἔστιν αὕτη· τῶν γοῦν ἄλλων στιγμῶν
ἐκάστη ἐκ τίνος; οὐ γὰρ δὴ ἐκ γε διαστήματός τινος καὶ αὐτῆς στιγμῆς.
ἀλλὰ μὲν οὐδὲ μόρια ἀδιαίρετα ἐνδέχεται τοῦ διαστήματος εἶναι [μόρια],
ὥσπερ τοῦ πλῆθους ἐξ ὧν αἱ μονάδες· ὁ μὲν γὰρ ἀριθμὸς ἐξ ἀδιαίρετων
σύγκειται τὰ δὲ μεγέθη οὐ.

7 ταῦτά] ταῦτα A^b || 12 second μόρια om. by pseudo-Alexander^p, excised by
Jaeger

52

Aristotle, *De Anima* 409 A 3-7

Ἔτι δ' ἐπεὶ φασι κινηθεῖσαν γραμμὴν ἐπίπεδον ποιεῖν, στιγμήν δὲ
γραμμὴν, καὶ αἱ τῶν μονάδων κινήσεις γραμμαὶ ἔσονται· ἡ γὰρ στιγμή

μονάς ἐστι θέσιν ἔχουσα, ὁ δ' ἀριθμὸς τῆς ψυχῆς ἤδη πού ἐστι καὶ θέσιν ἔχει.

53

Aristotle, *Metaphysics* 1092 A 17-21

Ἄτοπον δὲ καὶ τὸ τόπον ἅμα τοῖς στερεοῖς τοῖς μαθηματικοῖς ποιῆσαι (ὁ μὲν γὰρ τόπος τῶν καθ' ἑκάστον ἴδιος, διὸ χωριστὰ τόπων, τὰ δὲ μαθηματικά οὐ πού), καὶ τὸ εἰπεῖν μὲν ὅτι πού ἐσται, τί δὲ ἐστὶν ὁ τόπος μή.

1 τὸ A^bΓ: τὸν EJ || second τοῖς JA^bΓ, pseudo-Alexander^p: καὶ τοῖς E, pseudo-Alexander¹ || 3 τ[] τίς pseudo-Alexander^p

54

a. Iamblichus, *De Anima*, in Stobaeus, *Ecl.* I, 49, 32 (I, pp. 363, 26-364, 7)

Μετὰ δὴ ταῦτα τοὺς εἰς μαθηματικὴν οὐσίαν ἐντιθέντας τὴν οὐσίαν τῆς ψυχῆς καταλέγω διευκρινημένως. ἔστι δὴ γένος ἓν τι αὐτῆς τὸ σχῆμα, πέρας ὃν διαστάσεως, καὶ αὐτὴ <ή> διάστασις. ἐν αὐτοῖς μὲν οὖν τούτοις Σεβῆρος ὁ Πλατωνικὸς αὐτὴν ἀφωρίσατο, ἐν ἰδέᾳ δὲ τοῦ πάντῃ διαστα-
5 τοῦ Σπεύσιππος· ἐν αἰτίᾳ δὲ ἦτοι ἐνώσει τούτων ἄλλος ἂν τις καθαρώ-
τερον αὐτὴν προστήσαιο τελεώτατα.

2 καταλέγω διευκρινημένως F: καταλέγωσιν εὐκρινμένως P: καταλέγωμεν εὐκρινῶς Heeren || ἐν τι F: ἔτι P || 3 αὐτῇ] αὐτὴ P (after corr.) || ἡ added by Wachsmuth || 4 δὲ F: om. P || 4-5 διαστατοῦ] ἀδιαστάτου Ravaisson, pp. 41-43 || 5 Σπεύσιππος P²: πεύσιππος FP¹ || ἦτοι Usener: ἢ τῇ FP || 6 προστήσαιο F: προσήσαιο P

b. Iamblichus, *De Comm. Math. Sc.* IX (p. 40, 15-16)

Διόπερ οὔτε ἰδέαν τοῦ πάντῃ διαστατοῦ οὔτε κτλ. (sc. εἶναι τὴν ψυχὴν).

55

Damascius, *In Phaedonem* 177, 1-7 (pp. 107 and 109)

Ὅτι οἱ μὲν ἀπὸ τῆς λογικῆς ψυχῆς ἄχρι τῆς ἐμψύχου ἕξως ἀπαθανατί-
ζουσιν, ὡς Νουμήνιος· οἱ δὲ μέχρι τῆς φύσεως, ὡς Πλωτῖνος ἐνι ὅπου·
οἱ δὲ μέχρι τῆς ἀλογίας, ὡς τῶν μὲν παλαιῶν Ξενοκράτης καὶ Σπεύσιππος,
τῶν δὲ νεωτέρων Ἰάμβλιχος καὶ Πλούταρχος· οἱ δὲ μέχρι μόνης τῆς
5 λογικῆς, ὡς Πρόκλος καὶ Πορφύριος· οἱ δὲ μέχρι μόνου τοῦ νοῦ, φθείρουσι
γὰρ τὴν δόξαν, ὡς πολλοὶ τῶν Περιπατητικῶν· οἱ δὲ μέχρι τῆς ὅλης
ψυχῆς, φθείρουσι γὰρ τὰς μερικὰς εἰς τὴν ὅλην.

1 ἐμψύχου] ἀψύχου Bernays, Thedinga, *De Numenio*, p. 71, Lang, p. 80

56

- a. Cicero, *De Natura Deorum* I, 13, 32

Nec multo secus Speusippus Platonem avunculum subsequens et vim quandam (sc. esse deum) dicens qua omnia regantur, eamque animalem, evellere ex animis conatur cognitionem deorum.

- b. Minucius Felix, *Octavius* 19, 7 (p. 29)

Speusippum (sc. notum est) vim [naturalem] animalem, qua omnia regantur, deum nosse.

i naturalem excised by Davies

57

Philodemus, *De Pietate*, Pap. Hercul. 1428, frag. 22, 1-12 (Henrichs) = p. 72 (Gomperz) = N 1428 (*Herculaneum Volumnium Collectio Altera*, II, p. 7) = O 1226

2] . τα . [] []
 4 [.]χθε[. . . .]ρισμ[]
 4 τασουτ[. . .]ουτ[]
 6 χ . . . εν . . ν οὐδὲ [τάς]
 6 ψυχὰς τῶν καλῶν χ[ἀ]-
 8 γαθῶν θείας λέγων
 8 δυνάμεις, πολὺ δὲ [κα]-
 10 ταδεστέρας καὶ ἐλ-
 10 λειπούσας. παρ' Ἀρισ-
 12 τοτέλει δ' ἐν τῷ τρί-
 12 τῷ Περὶ φιλοσοφίας
 margo

2 No writing, cf. comm. *ad loc.* || 4 τοῖσιν[Henrichs (tentatively) || 5 χ . . δὲν or χ . . αὖν Henrichs || 5-6 supplements by Sauppe || 8 δὲ was supplied by Diels but is the reading of the papyrus || αα supplied by Sauppe || 10 after -σας there is a short empty space in the papyrus

58

Aetius, *Placita* I, 7, 20 (Diels, *Dox. Gr.*, p. 303, 3-5) in Stobaeus, *Ecl.* I, 1, 29b (I, p. 35, 3-4)

Σπεύσιππος τὸν νοῦν οὔτε τῷ ἐνὶ οὔτε τῷ ἀγαθῷ τὸν αὐτόν, ἰδιοφυῇ δέ.

1 Σπεύσιππος P: Πεύσιππος F || above αὐτόν F² wrote θεόν

59

Theophrastus, *Metaphysics* 6 A 23-B 16

Νῦν δ' οἷ γε πολλοὶ μέχρι τινὸς ἐλθόντες καταπαύονται, καθὰ περ καὶ οἱ τὸ ἐν καὶ τὴν ἀόριστον δυάδα ποιοῦντες· τοὺς γὰρ ἀριθμοὺς γεννήσαντες καὶ τὰ ἐπίπεδα καὶ τὰ σώματα σχεδὸν τᾶλλα παραλείπουσιν πλὴν ὅσον ἐφαπτόμενοι καὶ τοσοῦτο μόνον δηλοῦντες, ὅτι τὰ μὲν ἀπὸ τῆς
 5 ἀόριστου δυάδος, οἷον τόπος καὶ κενὸν καὶ ἄπειρον, τὰ δ' ἀπὸ τῶν ἀριθμῶν καὶ τοῦ ἐνός, οἷον ψυχὴ καὶ ἄλλ' ἅττα· χρόνον δ' ἅμα καὶ οὐρανὸν καὶ ἕτερα δὴ πλείω, τοῦ δ' οὐρανοῦ πέρι καὶ τῶν λοιπῶν οὐδεμίαν ἔτι ποιοῦνται μνεῖαν· ὡσαύτως δ' οἱ περὶ Σπεύσιππον, οὐδὲ τῶν ἄλλων οὐθείς πλὴν Ξενοκράτης· οὗτος γὰρ ἅπαντά πως περιτίθησιν περὶ τὸν κόσμον, ὁμοίως
 10 αἰσθητὰ καὶ νοητὰ καὶ μαθηματικὰ καὶ ἔτι δὴ τὰ θεῖα. πειράται δὲ καὶ Ἑστιάιος μέχρι τινός, οὐχ ὥσπερ εἴρηται περὶ τῶν πρώτων μόνον. Πλάτων μὲν οὖν ἐν τῷ ἀνάγειν εἰς τὰς ἀρχὰς δόξειεν ἂν ἅπτεσθαι τῶν ἄλλων εἰς τὰς ἰδέας ἀνάπτων, ταύτας δ' εἰς τοὺς ἀριθμούς, ἐκ δὲ τούτων εἰς τὰς ἀρχάς, εἴτα κατὰ τὴν γένεσιν μέχρι τῶν εἰρημένων· οἱ δὲ τῶν ἀρχῶν
 15 μόνον.

3 second καὶ] om. J: ποιοῦντες R¹ || τᾶλλα Brandis: τὰ ἄλλα P: τ' ἄλλα JCB: τᾶλλα RHD || 4 ὅσον] ὅσων J || 6-7 χρόνον . . . πλείω] om. by J; excised by Ritter, Usener, and others. Cf. comm. *ad loc.* with note 192 || 7 οὐδεμίαν] οὐδὲ μίαν J and C (after corr.): οὐδὲ μένων RB¹HD || ποιοῦνται] ποιοῦν in Σ, *pace* Ross and Fobes, probably = ποιοῦνται || 8 οἱ] οὐδ' οἱ J: οὐδὲ οἱ C || Σπεύσιππον] σπεύσιππον C: σπεύσιπτον RB¹D || 9 οὗτος] οὗτος P: οὕτως CR || γὰρ] γὰρ ἂν J¹ || περιτίθησιν] διατίθησιν Usener || 11 Ἑστιάιος] ἐστίαιος P: ἐστιάιος RD || μόνον] μόνων Σ || 12 ἀρχάς] ἀρχὰς τὰ ὑπὸ τὰς ἀρχὰς J || δόξειεν ἂν] δόξει ἐρᾶν J || 14 ἀρχάς] ἀρχὰς P || εἴτα] εἰ τα P || κατὰ] κατὰ γων Usener || 15 μόνον] μόνων Σ

60

Plutarch, *Quaest. Plat.* 8, 4, 1007 A-B (pp. 82 and 84)

Ῥητέον οὖν τοὺς ὑπὸ τούτων ταραττομένους δι' ἄγνοιαν οἶεσθαι τὸν χρόνον μέτρον εἶναι κινήσεως καὶ ἀριθμὸν κατὰ πρότερον καὶ ὕστερον, ὡς Ἀριστοτέλης εἶπεν, ἥ τὸ ἐν κινήσει ποσόν, ὡς Σπεύσιππος, ἥ διάστημα κινήσεως ἄλλο δ' οὐδέν, ὡς ἐνιοὶ τῶν Στωικῶν ἀπὸ συμβεβηκότος ὀρίζο-
 5 μενοι τὴν δ' οὐσίαν αὐτοῦ καὶ τὴν δύναμιν οὐ συνορῶντες, κτλ.

1-2 τὸν χρόνον] τῶν χρόνων J, g || 2 κατὰ πρότερον καὶ ὕστερον] κατὰ τὸ πρότερον καὶ τὸ ὕστερον Escorial T-11-5: κατὰ <τὸ> πρότερον καὶ ὕστερον Bernardakis || 4 ἄλλο] ἄλλα J¹, g || δ'] δὴ g || συμβεβηκότος] συμβεβηκότα J¹

61

a. Aristotle, *De Caelo* 279 B 32-280 A 10

Ἦν δέ τινες βοήθειαν ἐπιχειροῦσι φέρειν ἑαυτοῖς τῶν λεγόντων ἄφθαρτον μὲν εἶναι (sc. τὸν κόσμον) γενόμενον δέ, οὐκ ἔστιν ἀληθές· ὁμοίως

γάρ φασι τοῖς τὰ διαγράμματα γράφουσι καὶ σφᾶς εἰρηκέναι περὶ τῆς
γενέσεως, οὐχ ὥς γενομένου ποτέ, ἀλλὰ διδασκαλίας χάριν ὥς μᾶλλον
5 γνωρίζοντων, ὥσπερ τὸ διάγραμμα γιγνόμενον θεασαμένους. τοῦτο δ'
ἐστίν, ὥσπερ λέγομεν, οὐ τὸ αὐτό· ἐν μὲν γὰρ τῇ ποιήσει τῶν διαγραμ-
μάτων πάντων τεθέντων εἶναι ἅμα τὸ αὐτὸ συμβαίνει, ἐν δὲ ταῖς τούτων
ἀποδείξεσιν οὐ ταυτόν, ἀλλ' ἀδύνατον· τὰ γὰρ λαμβανόμενα πρότερον
καὶ ὕστερον ὑπεναντία ἐστίν· ἐξ ἀτάκτων γὰρ τεταγμένα γενέσθαι φασίν,
10 ἅμα δὲ ἄτακτον εἶναι καὶ τεταγμένον ἀδύνατον, ἀλλ' ἀνάγκη γένεσιν
εἶναι τὴν χωρίζουσιν καὶ χρόνον· ἐν δὲ τοῖς διαγράμμασιν οὐδὲν τῷ
χρόνῳ κεχώριται.

1 φέρειν E Simpl.¹, Philoponus, *De Aet. Mundi*, p. 216, 26 (Rabe): ἐπιφέρειν
JH || 5 γιγνόμενον EJ, Philoponus: γενόμενον H || 7 τὸ αὐτὸ] ταυτόν H || 9 γὰρ
E Simpl.^p, Philoponus: γάρ ποτε J and some later MSS: γάρ τὰ H || 9-10
τεταγμένα . . . τεταγμένον] τεταγμένον J || 10 δὲ EH, Philoponus: δὲ τὸ αὐτὸ
some later MSS and Simpl.^p || ἀνάγκη] om. E: added above the line by E^a

b. Scholion on Aristotle, *De Caelo* 279 B 32 ff. in *Cod. Paris. Graec.*
1853 (= E), p. 489 A 9-12 (Brandis)

Ὁ Ξενοκράτης καὶ ὁ Σπεύσιππος ἐπιχειροῦντες βοηθῆσαι τῷ Πλάτῳ
ἔλεγον ὅτι οὐ γενητὸν τὸν κόσμον ὁ Πλάτων ἐδόξαζεν ἀλλὰ ἀγέννητον,
χάριν δὲ διδασκαλίας καὶ τοῦ γνωρίσαι καὶ παραστήσαι αὐτὸ ἀκριβέστερον
ἔλεγε τοῦτο γενητὸν.

62

Aristotle, *De Motu Animalium* 699 A 12-24

Ἀπορήσειε δ' ἂν τις, ἄρ' εἴ τι κινεῖ τὸν ὅλον οὐρανόν, εἶναι τε δεῖ
ἀκίνητον, καὶ τοῦτο μὴδὲν εἶναι τοῦ οὐρανοῦ μόνον μὴδ' ἐν τῷ οὐρανῷ.
εἴτε γὰρ αὐτὸ κινούμενον κινεῖ αὐτόν, ἀνάγκη τινὸς ἀκινήτου θιγγάνον
κινεῖν, καὶ τοῦτο μὴδὲν εἶναι μόνον τοῦ κινουμένου· εἴτ' εὐθύς ἀκίνητόν
5 ἐστί τὸ κινεῖν, ὁμοίως οὐδὲν ἔσεσθαι τοῦ κινουμένου μόνον. καὶ τοῦτό
γ' ὀρθῶς λέγουσιν οἱ λέγοντες ὅτι κύκλῳ φερομένης τῆς σφαίρας οὐδ' ὅτι-
οῦν μένει μόνον· ἢ γὰρ ἂν ὅλην ἀναγκαῖον ᾗ μένειν, ἢ διασπᾶσθαι τὸ
συνεχὲς αὐτῆς. ἀλλ' ὅτι τοὺς πόλους οἴονται τινα δύναμιν ἔχειν, οὐδὲν
ἔχοντας μέγεθος ἀλλ' ὄντας ἔσχατα καὶ στιγμάς, οὐ καλῶς. πρὸς γὰρ
10 τῷ μηδεμίαν οὐσίαν εἶναι τῶν τοιούτων μηδενός, καὶ κινεῖσθαι τὴν μίαν
κίνησιν ὑπὸ δυοῖν ἀδύνατον· τοὺς δὲ πόλους δύο ποιοῦσιν.

1 τε δεῖ a: θέλει b Mich.¹ Γ || 3 αὐτόν] αὐτό a || 3-4 θιγγάνον κινεῖν b ΓΛ: θιγ-
γάνειν a || 5 ἔσεσθαι MSS, Γ: ἔσται Λ || 7 ἂν] om. b Γ || 8 πόλους] πολλοὺς b₁

63

a. Aristotle, *Anal. Post.* 97 A 6-22

Οὐδὲν δὲ δεῖ τὸν ὀριζόμενον καὶ διαιρούμενον ἅπαντα εἰδέναι τὰ ὄντα.
καίτοι ἀδύνατόν φασί τινες εἶναι τὰς διαφορὰς εἰδέναι τὰς πρὸς ἕκαστον

- μη εἰδότα ἕκαστον· ἄνευ δὲ τῶν διαφορῶν οὐκ εἶναι ἕκαστον εἰδέναι· οὗ γὰρ μη διαφέρει, ταῦτόν εἶναι τούτῳ, οὗ δὲ διαφέρει, ἕτερον τούτου.
- 5 πρῶτον μὲν οὖν τοῦτο ψευδός· οὐ γὰρ κατὰ πᾶσαν διαφορὰν ἕτερον· πολλὰ γὰρ διαφοραὶ ὑπάρχουσι τοῖς αὐτοῖς τῷ εἶδει, ἀλλ' οὐ κατ' οὐσίαν οὐδὲ καθ' αὐτά. εἴτα ὅταν λάβῃ τάντικείμενα καὶ τὴν διαφορὰν καὶ ὅτι πᾶν ἐμπίπτει ἐνταῦθα ἢ ἐνταῦθα, καὶ λάβῃ ἐν θατέρῳ τὸ ζητούμενον εἶναι, καὶ τοῦτο γινώσκη, οὐδὲν διαφέρει εἰδέναι ἢ μη εἰδέναι ἐφ' ὅσων κατηγο-
- 10 ροῦνται ἄλλων αἱ διαφοραί. φανερόν γὰρ ὅτι ἂν οὕτω βαδίζων ἔλθῃ εἰς ταῦτα ὧν μηκέτι ἔστι διαφορά, ἔξει τὸν λόγον τῆς οὐσίας. τὸ δ' ἅπαν ἐμπίπτειν εἰς τὴν διαίρεσιν, ἂν ἢ ἀντικείμενα ὧν μὴ ἔστι μεταξύ, οὐκ αἵτημα· ἀνάγκη γὰρ ἅπαν ἐν θατέρῳ αὐτῶν εἶναι, εἴπερ ἐκείνου διαφορά ἐστιν.

1 οὐδὲν δὲ] οὐδὲν B: οὐδὲ d || ἅπαντα] ἅπαν n || 2 second τὰς] τὰ d || 4 first οὗ] οὐ A || διαφέρει] διαφέρῃ Ad || εἶναι τούτῳ] εἶναι τοῦτο B || οὐ Bn Anon.^c: οὐ Ad || 7 εἴτα] om. A || ὅτι πᾶν] ὅταν d || 9 τοῦτο] τούτου d || γινώσκη] γινώσκει n || 10 ἄλλων] ἀλλ' ὧν d || 11 ἔστι] ἔσται B || ἅπαν] ἅπαντ' n^a || 12 ἢ ἀντικείμενα] ἢ τι κείμενα d || 13 ἐν] μὲν d || 14 ἐστι d and (as it seems) Eustr. and Philop.: ἔσται ABn

b. Anonymous, *In Anal. Post.*, pp. 584, 17-585, 2 (on 97 A 6 ff.)

- Σπευσίππου ταύτην τὴν δόξαν Εὐδημος εἶναι λέγει τὴν ὅτι ὀρίσασθαι ἀδύνατόν ἐστί τι τῶν ὄντων μὴ πάντα τὰ ὄντα εἰδότα. ἐπεὶ δὲ δοκεῖ πιθανότητά τινα εἰσφέρειν, τίθησιν αὐτήν. ἔστι γὰρ ὁ λόγος ὁ τοῦτο οἰόμενος δεικνύναι τοιοῦτος· δεῖ τὸν ὀριζόμενόν τι εἰδέναι τὴν πρὸς τὰ
- 5 διαφέροντα αὐτοῦ πάντα διαφορὰν· οὗ μὲν γὰρ μη διαφέρει τι, τούτῳ ταῦτόν ἐστιν, οὗ δὲ διαφέρει, ἕτερον. τὸν δὲ ὀριζόμενόν τι ὡς διαφέρον τῶν ἄλλων δεῖ εἰδέναι αὐτοῦ τὰς διαφοράς αἷς τῶν ἄλλων διαφέρει· μὴ γὰρ εἰδώς τις τοῦτο καὶ τὸ ταῦτόν ἕτερον καὶ τὸ ἕτερον ταῦτόν ἡγήσεται. οὕτως δ' οὐδ' ἀποδώσει τὴν οἰκείαν τινὸς οὐσίαν· ἂν γὰρ οὕτω
- 10 τύχῃ, οὐδὲν κωλύει τὸν ἀποδιδόμενον λόγον κοινὸν εἶναι καὶ ἄλλων τινῶν. ἀλλὰ μὴν ἀδύνατον τὴν πρὸς τινα διαφορὰν τινος εἰδέναι μὴ εἰδότα κάκεῖνα ὧν τὸ προκείμενον διαφέρει. δεῖ ἄρα πάντα εἰδέναι τὸν ὀριζόμενόν τι, καὶ γὰρ καὶ τοῦτο <δ> ὀρίζεται ὁ ὀριζόμενος (πῶς γὰρ ἂν αὐτὸ ὀρίσαιτο;) καὶ τᾶλλα πάντα ὧν ὡς ἕτερον ὃν αὐτὸ ὀρίζεται. ὅτι δὲ μὴ ὑγιῆς ὁ λόγος
- 15 οὗτος μὴδ' ἀνάγκη τὸν ὀριζόμενόν τι πάντα τὰ ὄντα εἰδέναι, δείκνυσσι.

1 Σπευσίππου] Σπεύσιππος R: ω above ος U || 3 εἰσφέρειν] om. U || 5 μὲν U: μοι R || 6 δὲ ὀριζόμενόν] δὲ ὀριζόμενόν a: διοριζόμενόν U || 9 first οὕτως] οὗτος R || 12 ὧν] ὡς U || 13 second καὶ] om. U || τοῦτο <δ> Wallies: τοῦτω RUa

c. Themistius, *In Anal. Post.*, p. 58, 4-8 (on 97 A 6 ff.)

Σπεύσιππος δὲ οὐ καλῶς λέγει φάσκων ἀναγκαῖον εἶναι τὸν ὀριζόμενον πάντα εἰδέναι· δεῖ μὲν γάρ, φησί, γινώσκειν τὰς διαφοράς αὐτοῦ πάσας,

αὐτὸς τῶν ἀλλων διεγίνοντο, ἀδύνατον δὲ εἶδεναι τὰς διαφοράς τὰς πρὸς ἕκαστον μὴ εἰδόμεναι ἀπὸ ἕκαστον.

d. Philoponus, *In Anal. Post.*, pp. 405, 27-406, 2 (on 97 A 6 ff.).

Τούτο λέγει ἀναφύων τοὺς λόγους δι' ὧν ἐπεξηγεῖται ὁ Ἀπελούσιος ἀναφύσας καὶ τὴν διαίρεσιν καὶ τοὺς ὁρισμοὺς. ἐπεξηγεῖται γὰρ οὗτος διαιρέσειν, ὡς οὐκ ἔστιν ἀποδοῦναι ὁρισμὸν τινος, λέγων ὡς ὁ θεῶν διαιρέσειν γινώσκουσιν πᾶντα καὶ τὰς διαφοράς ἀπὸ τῆς φύσεως τοῦ ἀνθρώπου ἢ τοῦ ζῴου ἢ ἀλλου τινὸς ἐν τῷ χωρῖζέσθαι τῶν ἀλλων πᾶντων. τὸ δὲ χωρῖζόμενον διὰ τινων διαφορῶν δεῖ χωρῖζεσθαι. ἐπεὶ δὲ ἀδύνατον πᾶντα τὰ ὄντα γινώσκουσιν ἢ τὰς διαφορὰς ἀπὸ τῶν, λοιπὸν δι' ὁρισμὸν παραστῆσαι τι ἀδύνατον.

4 τοῦ ζῴου ἢ α: om. CFE

e. Eustratius, *In Anal. Post.*, p. 202, 16-33 (on 97 A 6 ff.).

Περὶ μὲν ὅρου πῶς τε θηρεῖται καὶ ὅπως ἀπὸ τῆς διαίρεως συντάσσεται, ἐπεὶ δὲ Ἀπελούσιος πιθανὸν εἶναι λόγον εἰσαγγεῖν εἰκοι, δι' οὗ τὴν ὁριστικὴν εἰσφοράν ἀνελέγειν καὶ δεῖξαι ἀδύνατον τὸ ὁρίεσθαι, ἤτοι μὴ παραστῆσαι τοῦ ὁρισμοῦ. τοῦτο δ' οὐκ ἂν ἀλλὰς γένοιτο, εἰ μὴ τις ἀπὸ τῶν λόγων τῶν λοιπῶν διαστήσειεν. οὐκ ἂν δὲ δεῖ διαστήσῃ μὴ τὰς διαφορὰς εἰδόμεναι τὰς πρὸς ἕκαστα. οὐκ ἂν δὲ τὰς διαφορὰς εἰδὲν μὴ τὴν εἰσφοράν. ὡς δ' ἐν τῇ ὁρίσασθαι τὴν εἰδόμεναι ἀπὸ τῶν διαφορῶν. ὅτι δ' ἀναγκαστὸν εἰδέναι τὰς διαφορὰς τὰς πρὸς ἕκαστον τοῦ πρὸς ἐκαστὸν. οὐδὲν διαφέρει πρὸς ἕκαστον, οὐδὲν διαφέρει πρὸς ἕκαστον. διαιρέσει γὰρ διαφέρει τὸ διαφέρειν. εἰ δὲ μὴ διαφέρει πρὸς ἕκαστον, ταῦτ' οὐδὲν εἰδέναι. ἀλλὰ μὴν ἔστιν ἕκαστον. εἰ δὲ ἔστι, δεῖ ταύτην εἰδέναι. ἀλλὰς γὰρ οὐδ' ὅτι διαιρέσει ἕκαστον εἴσεται, οὐδ' ἕκαστον ἀποδώσει τὸν ἀπὸ τῶν ἀλλων χωρῖζόντα. ἢ καὶ ἕκαστον εἴδωμεν, οὗτος μὲν ὁ λόγος Ἀπελούσιου, δι' οὗ εἰδόμεναι ἀναφύειν τὸ ὁρίεσθαι.

8 μὴ Hayduck: ἢ MSS

64

Aristotle, *Topics* 102 A 5-9

Ὅμοιον μὲντοι καὶ τὸ τοιοῦτον θέτον, ὅλον ὅτι καλὸν ἔστι τὸ πρῆπον. ὁμοίως δὲ καὶ τὸ πρῆπον ταῦτον ἀποθῆναι καὶ ἐπιστήμῃ ἢ ἔτερον. καὶ

γὰρ περὶ τοὺς ὁρισμοὺς πότερον ταῦτόν ῃ ἕτερον ἢ πλείστη γίνεται δια-
τριβή.

1 ὁρικόν] ὁριστικόν P || ὅτι] ὅτι <τὸ> Ross and perhaps also V before erasure ||
2 ταῦτόν] ταῦτόν ἐστὶν C

65

Aristotle, *Topics* 108 B 23-31

Ὅμοίως δὲ καὶ ἐν τοῖς πολὺ διεστῶσι χρήσιμος πρὸς τοὺς ὁρισμοὺς
ἢ τοῦ ὁμοίου θεωρία, οἷον ὅτι ταῦτόν γαλήνη μὲν ἐν θαλάσῃ, νηνεμία δ'
ἐν ἀέρι (ἐκάτερον γὰρ ἡσυχία), καὶ ὅτι στιγμή ἐν γραμμῇ καὶ μονὰς ἐν
ἀριθμῷ (ἐκάτερον γὰρ ἀρχή). ὥστε τὸ κοινὸν ἐπὶ πάντων γένος ἀποδιδόν-
5 τες δόξομεν οὐκ ἄλλοτρίως ὀρίζεσθαι. σχεδὸν δὲ καὶ οἱ ὀριζόμενοι οὕτως
εἰώθασιν ἀποδιδόναι· τὴν τε γὰρ μονάδα ἀρχὴν ἀριθμοῦ φασὶν εἶναι καὶ
τὴν στιγμήν ἀρχὴν γραμμῆς. δῆλον οὖν ὅτι εἰς τὸ κοινὸν ἀμφοτέρων γένος
τιθέασιν.

1 χρήσιμος] χρήσιμον P || 2 γαλήνη after θαλάσση u || 3 ὅτι] ὅτι ὡς C || second
καὶ om. C || 5 δόξομεν] after ἄλλοτρίως C: δειξομεν P || ol] om. A

66

a. Aristotle, *Metaphysics* 1044 A 5-9

Καὶ ὁ ὁρισμὸς εἰς ἐστίν, ὁμοίως δὲ οὐδὲ τοῦτον ἔχουσι λέγειν. καὶ τοῦτο
εἰκότως συμβαίνει· τοῦ αὐτοῦ γὰρ λόγου, καὶ ἡ οὐσία ἐν οὕτως, ἀλλ' οὐχ
ὡς λέγουσιν τινες οἷον μονὰς τις οὐσα ἢ στιγμή, ἀλλ' ἐντελέχεια καὶ φύσις
τις ἐκάστη.

b. Aristotle, *Metaphysics* 1045 A 12-14

Ὁ δ' ὁρισμὸς λόγος ἐστίν εἰς οὐ συνδέσμων καθάπερ ἡ Ἰλιάς ἀλλὰ τῷ
ἐνὸς εἶναι.

67

Aristotle, *De Partibus Animalium* 642 B 5-644 A 11

Λαμβάνουσι δ' ἔνιοι τὸ καθ' ἕκαστον, διαιρούμενοι τὸ γένος εἰς δύο
διαφοράς. τοῦτο δ' ἐστὶ τῇ μὲν οὐ ῥάδιον, τῇ δὲ ἀδύνατον. ἐνίων γὰρ
ἔσται διαφορὰ μία μόνη, τὰ δ' ἄλλα περιεργα, οἷον ὑπόπου, δίπου,
σχιζόπου· αὕτη γὰρ μόνη κυρία. εἰ δὲ μή, ταῦτόν πολλακίς ἀναγκαῖον
5 λέγειν.

Ἔτι δὲ προσήκει μὴ διασπᾶν ἕκαστον γένος, οἷον τοὺς ὀρνίθας τοὺς
μὲν ἐν τῇδε, τοὺς δ' ἐν ἄλλῃ διαιρέσει, καθάπερ ἔχουσιν αἱ γεγραμμένα
διαιρέσεις· ἐκεῖ γὰρ τοὺς μὲν μετὰ τῶν ἐνύδρων συμβαίνει διηρῆσθαι,

- τοὺς δ' ἐν ἄλλῳ γένει. ταύτῃ μὲν οὖν τῇ ὁμοιότητι ὄρνις ὄνομα κεῖται,
 10 ἑτέρα δ' ἰχθύς. ἄλλαι δ' εἰσὶν ἀνώνυμοι, οἷον τὸ ἐναίμιον καὶ τὸ ἀναιμιον·
 ἐφ' ἑκατέρῳ γὰρ τούτων οὐ κεῖται ἐν ὄνομα. εἴπερ οὖν μὴδὲν τῶν ὁμο-
 γενῶν διασπαστέον, ἢ εἰς δύο διαίρεσις μάταιος ἂν εἴη· οὕτως γὰρ
 διαιροῦντας ἀναγκαῖον χωρίζειν καὶ διασπᾶν· τῶν πολυπόδων γὰρ ἔστι
 τὰ μὲν ἐν τοῖς πεζοῖς τὰ δ' ἐν τοῖς ἐνύδροις.
- 15 Ἔτι στερήσει μὲν ἀναγκαῖον διαιρεῖν, καὶ διαιροῦσιν οἱ διχοτομοῦντες.
 οὐκ ἔστι δὲ διαφορὰ στερήσεως ἢ στέρησις· ἀδύνατον γὰρ εἶδῃ εἶναι
 τοῦ μὴ ὄντος, οἷον τῆς ἀποδίας ἢ τοῦ ἀπτέρου ὥσπερ πτερώσεως καὶ
 ποδῶν. δεῖ δὲ τῆς κοθόλου διαφορᾶς εἶδῃ εἶναι· εἰ γὰρ μὴ ἔσται, διὰ
 τί ἂν εἴη τῶν καθόλου καὶ οὐ τῶν καθ' ἑκαστον; τῶν δὲ διαφορῶν αἱ
 20 μὲν καθόλου εἰσὶ καὶ ἔχουσιν εἶδη, οἷον πτερότης· τὸ μὲν γὰρ ἄσχιστον
 τὸ δ' ἐσχισμένον ἐστὶ πτερόν. καὶ ποδότης ὡσαύτως ἢ μὲν πολυσχιδῆς,
 ἢ δὲ δισχιδῆς, οἷον τὰ διχαλά, ἢ δ' ἀσχιδῆς καὶ ἀδιαίρετος, οἷον τὰ
 μώνυχα. χαλεπὸν μὲν οὖν διαλαβεῖν καὶ εἰς τοιαύτας διαφορὰς ὧν ἔστιν
 εἶδῃ, ὥσθ' ὅτιοῦν ζῶον ἐν ταύταις ὑπάρχειν καὶ μὴ ἐν πλείοσι ταυτόν,
 25 οἷον πτερωτὸν καὶ ἄπτερον (ἔστι γὰρ ἄμφω ταυτόν, οἷον μύρμηξ καὶ
 λαμπυρίς καὶ ἕτερα τέτα), πάντων δὲ χαλεπώτατον ἢ ἀδύνατον εἰς τὰ
 ἀντικείμενα. ἀναγκαῖον γὰρ τῶν καθ' ἑκαστον ὑπάρχειν τινὲ τῶν δια-
 φορῶν ἐκάστην, ὥστε καὶ τὴν ἀντικειμένην. εἰ δὲ μὴ ἐνδέχεται τοῖς
 εἶδει διαφέρουσιν ὑπάρχειν εἰδὸς τι τῆς οὐσίας ἄτομον καὶ ἐν, ἀλλ' αἰ
 30 διαφορὰν ἔξει (οἷον ὄρνις ἀνθρώπου· ἢ διποδία γὰρ ἄλλη καὶ διάφορος·
 καὶ εἰ ἐναίμα, τὸ αἷμα διάφορον, ἢ οὐδὲν τῆς οὐσίας τὸ αἷμα θετέον· εἰ
 δ' οὕτως ἐστίν, ἢ μία διαφορὰ δυσὶν ὑπάρξει)· εἰ δὲ τοῦτο, δῆλον ὅτι
 ἀδύνατον στέρησιν εἶναι διαφορὰν. ἔσονται δ' αἱ διαφοραὶ ἴσαι τοῖς
 ἀτόμοις ζώοις, εἴπερ ἄτομά τε ταῦτα καὶ αἱ διαφοραὶ ἄτομοι, κοινὴ δὲ μὴ
 35 ἔστιν. εἰ δ' ἐνδέχεται μὴ ὑπάρχειν καὶ κοινήν ἄτομον δέ, δῆλον ὅτι κατὰ γε
 τὴν κοινήν ἐν τῷ αὐτῷ ἐστίν, ἕτερα ὄντα τῷ εἶδει ζῶα. ὥστ' ἀναγκαῖον,
 εἰ ἴδιοι αἱ διαφοραὶ εἰς ἃς ἅπαντα ἐμπίπτει τὰ ἄτομα, μηδεμίαν αὐτῶν
 εἶναι κοινήν. εἰ δὲ μή, ἕτερα ὄντα εἰς τὴν αὐτὴν βαδιεῖται. δεῖ δ' οὕτε
 τὸ αὐτὸ καὶ ἄτομον εἰς ἑτέραν καὶ ἑτέραν ἵεναι διαφορὰν τῶν διηρημένων,
 40 οὗτ' εἰς τὴν αὐτὴν ἕτερα, καὶ ἅπαντα εἰς ταύτας. φανερόν τοίνυν ὅτι οὐκ
 ἔστι λαβεῖν τὰ ἄτομα εἶδη ὡς διαιροῦνται οἱ εἰς δύο διαιροῦντες τὰ ζῶα
 ἢ καὶ ἄλλο ὅτιοῦν γένος. καὶ γὰρ κατ' ἐκείνους ἀναγκαῖον ἴσας τὰς ἐσ-
 χάτας εἶναι διαφορὰς τοῖς ζώοις πᾶσι τοῖς ἀτόμοις τῷ εἶδει. ὄντος γὰρ
 τοῦδὲ τινος γένους, οὐ διαφοραὶ πρῶται τὰ λευκά, τούτων δ' ἑκατέρου
 45 ἄλλαι, καὶ οὕτως εἰς τὸ πρόσω ἕως τῶν ἀτόμων, αἱ τελευταῖαι τέτταρες
 ἔσονται ἢ ἄλλο τι πλῆθος τῶν ἀφ' ἐνὸς διπλασιαζομένων· τοσαῦτα δὲ
 καὶ τὰ εἶδη. ἔστι δ' ἡ διαφορὰ τὸ εἶδος ἐν τῇ ὕλῃ. οὕτε γὰρ ἄνευ ὕλης
 οὐδὲν ζῶον μόνον, οὕτε μόνῃ ἡ ὕλη· οὐ γὰρ πάντως ἔχον σῶμα ἔσται
 ζῶον, οὐδὲ τῶν μορίων οὐδέν, ὥσπερ πολλάκις εἴρηται.

զ 150. (աղբթբէս աստիճանս յառ աստիճանս Ը զի . աստիճ զի Կ Յօղիճոսն զի ԼՅՈ յոյս , Կթոթօնի տալէս Վնդոյի Կալաւնչաւ Վէ Լնչոցն Յաղթնոս Լնչն Վն յթառ ինչս , Կն Լնս զի 11 Լն 5ն Լնթոթօնի Լնթոթնի Վն իսառ Տոսթն Ըն զսն Լնն յաղթնթի Եիճնոս Կ ժրլ ԵնԸն . Լնոսթնչն զի Տրծս Յօղիճոսն զի ԼՅՈ յոյս , ԼՄՃ Լնչ , 5ն յաղթնչաւնոս , Կաղթոսնչոյս Վն ԼՅՈ , Կթոթ 58
-ոյս ԼՄՃ Կոյ Լնչ , Լթոյ ինչս 5ն Եթն) յաղթնչաւնոս Ե Լնչ Լնթնիս ինչս Ե Լնչ , Լննթոյս Լոսոսնչ Ըս Լն Կթոթօնի յաղթնչ Լնոյ ժրլ Լոսոսնչ . Լոթնոթ 5նԼն Կ իս Կսոնոյի 5ն Լոս Ժոսոյ , 5ոթն զի Խնն Լոնոթնի Լնոյս յաղթնիս Լնոյս Լոսոսնչ Ըս Լն Կաղթնչոյս Կն Լն յաղթնչոյս Կն Ը 11 Ը

08 πονηροί και

[illegible]

ևոծեիկ ըւ յառ ևոծկա ըւ իքոծոփաւոց տալէ և ևոյո Կնո, իջնէ ևճ աւուա թը իճ 59
 ՚նյոժալ աւաւծկնոց ըո, ևոտիւտոցն ևթի իճ, ևուաաաճ ևոյ. աւաոցոծա ՚նալա ՚նոյ
 ևաւոց, ևա ևճ ևաւո, ՚նոյց, ևոաւա, ևոաւոծոկա ևոյո, աւաո իաղալաւա աոծկա
 յառ ածեիկ աոց, ևաշաւէ իոյ ժալ աւաւա. ևաշոաւոց ևնէ աւոա աոշոց ևճ ժալ
 իաւաւաոյ. աւաոշոաւոց ևծեիկ ևա յառ ևոյոծկ ևա յառ. ՚նալա ևառկաւոծոտ ևոյ
 ըւ ժաւաղառ. ածաւաղ յառ յաւաւա աւաճ յառ իալժաւոց ևոփոյ իոյ ևալա աւա ժալ 60
 աւաճ. յաւաւա յառ յաւաւաոծա ևոլ աւաոշոցնոյ իաւա ևճ յառ ևոյո, ՚նալաոի ՚նա
 յառ իաւաոիոյ ըոա իոալժա իոաւաոա իոաւ ալաոիոյ և յա իաւաոա թը իքոծ II
 ևաւա

55 ὅλον λευκότητος καὶ μελανίας καὶ εὐθύτης καὶ κατὰ πλάτος καὶ ὕψος
ἔστι τοὺς ἀντικειμένους διακεῖν. διάφορα γὰρ ἀλλήλοις πᾶντι κείμενα,
ὡς ἔχειν τὰς γωνίας. διάφορα ἦ, τῶ ἀντικειμένῳ διακεῖσθαι καὶ πῇ τὸ πᾶν ἐξ ὧν

[illegible]

90 ἀδύνατον πλείους εἶναι τοιαύτας, δῆλον· ἀεὶ γὰρ βαδίζων ἐπὶ τὴν ἐσχάτην
 διαφορὰν ἀφικνεῖται, ἀλλ' οὐκ ἐπὶ τὴν τελευταίαν καὶ τὸ εἶδος. αὕτη δ'
 ἐστὶν ἡ τὸ σχιζόπουν μόνον, ἡ πᾶσα ἡ σύμπλεξις, ἐὰν διαιρῇται ἄνθρωπον,
 οἷον εἴ τις συνθεῖη ὑπόπουν, δίπουν, σχιζόπουν. εἰ δ' ἦν ὁ ἄνθρωπος
 σχιζόπουν μόνον, οὕτως ἐγίγνετ' ἂν αὕτη μία διαφορά. νῦν δ' ἐπειδὴ οὐκ
 95 ἐστὶν, ἀνάγκη πολλὰς εἶναι μὴ ὑπὸ μίαν διαίρεσιν. ἀλλὰ μὴν πλείους γε
 τοῦ αὐτοῦ οὐκ ἐστὶν ὑπὸ μίαν διχοτομίαν εἶναι, ἀλλὰ μίαν κατὰ μίαν
 τελευτᾶν. ὥστε ἀδύνατον ὅτιοῦν λαβεῖν τῶν καθ' ἕκαστον ζώων δίχα
 διαιρουμένους.

4 σχιζόπουν Π: σχιζόπουν ἄπουν EPUSZYΔ || 8 διηρῆσθαι] διαιρεῖσθαι PUSZ:
 διηρηκέναι Δ || 11 γάρ] γοῦν P || 19 τί ἂν εἴη] τίνα αἰτίαν ἔσται Y || ἕκαστον]
 ἕκαστα PY || 21 ἐστὶ] om. USZ || 22 διχαλά] διχηλά YΔΠ: δίχηλα PΣ || ἀδιαίρε-
 τος] ἀδιαίρετα P || 26 ἡ ἀδύνατον] om. Π || 26-27 εἰς τὰ ἀντικείμενα Titze: εἰς
 τὰ ἄναιμα MSS (om. Δ) Mich.: εἰς τὰς ἀντικειμένους Peck: εἰς τὰ ἄτομα Prantl:
 εἰς τὰ ἐναντία Ogle || 29 ἀεὶ] εἶδει P: om. USZΔΠ || 33 αἰ] om. USA || 34 τε]
 om. Y || 35 μὴ] excised by Titze and others || ὑπάρχειν MSS: ὑπάρχειν <...>
 Louis || καὶ] om. Π || 36 after κοινὴν (καινὴν P) P and Y add ἀρχὴν; Σ adds
 διαφορὰν || 40 after αὐτὴν Σ adds διαφορὰν ἄτομον οὖσαν || ἕτερα] ἕτερον ΠΠ:
 ἕτερα εἶδη Σ || 44 τὰ λευκὰ Cornford || 45 ἄλλαι] ἄλλων EP: ἄλλω Δ || ἕως τῶν] ἕως οὗ
 τῶν Y || 47 τὸ εἶδος ἐν τῇ ὕλῃ] ἐν τῇ ὕλῃ τὸ εἶδος YΔ || 48 οὐδὲν ζῶου] οὐδὲν τι
 ζώου P || 51 ἴσας] om. SΣ || 54 διαίρειν] δεῖ διαίρειν Δ: χρὴ διαίρειν Π: διαιροῦσι
 Peck || 61 second τῷ] om. EYΠ || 65 διαφορὰς] διαφορὰν USZYΠ || 66 ὁποιουῶν]
 ὁποιοῦν E: ὁποιοῦν YΔ: ὁποιοῦν PSUΣΠ: ὁποιοῦν Louis || διαφορᾶ]
 διαφορὰν PUIΠ || 67 γένει] γένος EUSΔ² || 69 οὐ κατὰ τὴν διχοτομίαν om.
 USΠ (οὐ om. Σ) || 71 after μόνον PY add ἡ || καὶ] om. E || 72 διαφορᾶς]
 διαφορᾶ ES: διαφορὰν P || 72-73 λαμβάνη τὴν διαφορὰν] λαμβάνη τῆς διαφορᾶς
 P: λαμβάνη διαφορὰν Y || 74-75 τοῖς διαιρουμένοις] om. P || 79 ἐν] αἰ SU ||
 84 ἐὰν μὴ] ἐὰν τε E: ἂν τε Y || 84-86 ἔχη... σχιζόπουν] ἔχη διαφορὰν, ἐάντε
 μὴ ἔχη, οἷον τὸ πολυσιχιδὲς πρὸς τὸ σχιζόπουν E || 86 σχιζόπουν] after this E
 and Δ have (καὶ Δ) συμπεπλεγμένα δὲ οἷον τὴν σχιζοποδίαν || τοῦτο] τοιαύτη
 EΔ || 88 σύμβαινει δοκεῖν] συμβαίνειν δοκεῖ Y || 89 πολύπουν MSS: σχιζόπουν
 Düring || 91 οὐκ] om. E || 93 δίπουν] πολύπουν PYΔ: om. E || σχιζόπουν]
 δίπουν EPYΔ¹ || 97 τελευτᾶν] τελευτᾷ EP || ἕκαστον] ἕκαστα Y

68

a. Simplicius, *In Categ.*, p. 38, 19-24

Σπεύσιππον τοῖνυν ἱστορεῖ Βόηθος τοιαύτην διαίρεσιν παραλαμβάνειν
 τὰ ὀνόματα πάντα περιλαμβάνουσιν. τῶν γὰρ ὀνομάτων, φησί, τὰ μὲν
 ταυτώνυμα ἐστὶν, τὰ δὲ ἑτερώνυμα· καὶ τῶν ταυτάνυμων τὰ μὲν ὁμώνυμα
 ἐστὶν, τὰ δὲ συνώνυμα (κατὰ τὴν τῶν παλαιῶν συνθήθειαν ἀκούοντων
 5 ἡμῶν τὰ συνώνυμα)· τῶν δὲ ἑτερώνυμων τὰ μὲν εἶναι ἰδίως ἑτερώνυμα,
 τὰ δὲ πολύνυμα, τὰ δὲ παρώνυμα.

1 Σπεύσιππον] πεύσιππον A || 2-3 φησί, ... ἐστὶν] φησί after ἐστὶν A || 4 τῶν
 παλαιῶν συνθήθειαν] lac. in L¹: νῦν σημασίαν L⁴ || 5 ἑτερώνυμων] ἑτερωνόμων

πάλιν ν || τὰ μὲν εἶναι ἰδίως] lacuna of seven letters in L¹: τὰ μὲν L⁴ || εἶναι JKA: ἔστιν ν

b. Simplicius, *In Categ.*, p. 29, 5

Σπεύσιππος δέ, ὥς φασιν, ἤρκειτο λέγειν 'ὁ δὲ λόγος ἕτερος.'

1 ὥς φασιν] φησιν A^p || ἤρκειτο JL: ἤρκει τὸ A^p: ἀρκεῖτο Kv

c. Porphyry, Πρὸς Γεδάλειον, in Simplicius, *In Categ.*, p. 36, 25-31

'Ἐνθα δὲ περὶ τὰς πλείους φωνὰς ἡ σπουδὴ καὶ τὴν πολυειδῆ ἐκάστου ὀνομασίαν, ὥσπερ ἐν τῷ Περὶ ποιητικῆς καὶ τῷ τρίτῳ Περὶ ῥητορικῆς, τοῦ ἐτέρου συνωνύμου δεόμεθα, ὅπερ πολuwνυμον ὁ Σπεύσιππος ἐκάλει. καὶ οὐ καλῶς ὁ Βόηθος παραλελείφθαι τῷ Ἀριστοτέλει φησὶ τὰ παρὰ
5 τοῖς νεωτέροις καλούμενα συνώνυμα, ἅπερ Σπεύσιππος ἐκάλει πολuw-
νυμα· οὐ γὰρ παραλέλειπται, ἀλλ' ἐν ἄλλαις πραγματείαις, ἐν αἷς ἦν οἰκεῖος ὁ λόγος, παρείληπται.'

3 Σπεύσιππος] lac. in L¹: supplied by L⁴ || 4-5 τὰ . . . νεωτέροις] lac. in L¹: τὰ ἀπὸ τῶν ναιωτέρων supplied by L⁴ || 5 συνώνυμα] καὶ τὰ τοιαῦτα πολuwνυμα συνώνυμα καλούμενα added by ν

69

a. Aristotle, *Sophistici Elenchi* 170 B 12-171 B 2

Οὐκ ἔστι δὲ διαφορὰ τῶν λόγων ἣν λέγουσί τινες, τὸ εἶναι τοὺς μὲν πρὸς τοῦνομα λόγους, ἐτέρους δὲ πρὸς τὴν διάνοιαν· ἀποπον γὰρ τὸ ὑπολαμβάνειν ἄλλους μὲν εἶναι πρὸς τοῦνομα λόγους, ἐτέρους δὲ πρὸς τὴν διάνοιαν, ἀλλ' οὐ τοὺς αὐτοὺς. τί γὰρ ἔστι τὸ μὴ πρὸς τὴν διάνοιαν
5 ἀλλ' ἡ ὅταν μὴ χρῆται τῷ ὀνόματι ἐφ' ᾧ οἰόμενος ἐρωτᾶσθαι ὁ ἐρωτώ-
μενος ἔδωκεν; τὸ δ' αὐτὸ τοῦτό ἐστι καὶ πρὸς τοῦνομα· τὸ δὲ πρὸς τὴν διάνοιαν, ὅταν ἐφ' ᾧ ἔδωκεν διανοηθεῖς. εἰ δὲ τις πλείω σημαίνοντος τοῦ ὀνόματος οἶοιτο ἐν σημαίνειν καὶ ὁ ἐρωτῶν καὶ ὁ ἐρωτώμενος (οἷον ἴσως τὸ ὄν ἢ τὸ ἐν πολλὰ σημαίνει, ἀλλὰ καὶ ὁ ἀποκρινόμενος καὶ ὁ ἐρωτῶν
10 Ζήνων ἐν οἰόμενος εἶναι ἠρώτησε, καὶ ἔστιν ὁ λόγος ὅτι ἐν πάντα), οὗτος πρὸς τοῦνομα ἔσται ἢ πρὸς τὴν διάνοιαν τοῦ ἐρωτωμένου διειλεγμένος; εἰ δέ γέ τις πολλὰ οἶεται σημαίνειν, δῆλον ὅτι οὐ πρὸς τὴν διάνοιαν. πρῶτον μὲν γὰρ περὶ τοὺς τοιούτους ἐστὶ λόγους τὸ πρὸς τοῦνομα καὶ πρὸς τὴν διάνοιαν ὅσοι πλείω σημαίνουσιν, εἴτα περὶ ὄντιν-
15 οῦν ἐστίν· οὐ γὰρ ἐν τῷ λόγῳ ἐστὶ τὸ πρὸς τὴν διάνοιαν εἶναι, ἀλλ' ἐν τῷ τὸν ἀποκρινόμενον ἔχειν πως πρὸς τὰ δεδομένα. εἴτα πρὸς τοῦνομα πάντας ἐνδέχεται αὐτοὺς εἶναι· τὸ γὰρ πρὸς τοῦνομα τὸ μὴ πρὸς τὴν διάνοιαν εἶναι ἐστὶν ἐνταῦθα. εἰ γὰρ μὴ πάντες, ἔσονται τινες ἕτεροι οὔτε πρὸς τοῦνομα οὔτε πρὸς τὴν διάνοιαν· οἱ δὲ φασὶ πάντας, καὶ διαιροῦνται

20 ἢ πρὸς τοῦνομα ἢ πρὸς τὴν διάνοιαν εἶναι πάντας, ἄλλους δ' οὐ. ἀλλὰ μὴν ὅσοι συλλογισμοὶ εἰσι παρὰ τὸ πλεοναχῶς, τούτων εἰσὶ τινες οἱ παρὰ τοῦνομα. ἀτόπως μὲν γὰρ καὶ εἴρηται τὸ παρὰ τοῦνομα φάναι πάντας τοὺς παρὰ τὴν λέξιν· ἀλλ' οὖν εἰσὶ τινες παραλογισμοὶ οὐ τῷ τὸν ἀποκρινόμενον πρὸς τούτους ἔχειν πως, ἀλλὰ τῷ τοιονδὶ ἐρώτημα τὸν λόγον
25 αὐτὸν ἔχειν ὁ πλείω σημαίνει.

“Ὅλως τε ἄτοπον τὸ περὶ ἐλέγχου διαλέγεσθαι ἀλλὰ μὴ πρότερον περὶ συλλογισμοῦ· ὁ γὰρ ἔλεγχος συλλογισμὸς ἐστίν, ὥστε χρὴ καὶ περὶ συλλογισμοῦ πρότερον ἢ περὶ ψευδοῦς ἐλέγχου· ἐστὶ γὰρ ὁ τοιοῦτος ἔλεγχος φαινόμενος συλλογισμὸς ἀντιφάσεως. διὸ ἢ ἐν τῷ συλλογισμῷ
30 ἔσται τὸ αἵτιον ἢ ἐν τῇ ἀντιφάσει (προσκεῖσθαι γὰρ δεῖ τὴν ἀντίφασιν), ὅτε δ' ἐν ἀμφοῖν, ἂν ἢ φαινόμενος ἔλεγχος. ἐστὶ δὲ ὁ μὲν τοῦ ‘σιγῶντα λέγειν’ ἐν τῇ ἀντιφάσει, οὐκ ἐν τῷ συλλογισμῷ, ὁ δὲ ‘ἂ μὴ ἔχει τις, δοίη ἅν’ ἐν ἀμφοῖν, ὁ δὲ ὅτι ἡ ‘Ὀμήρου ποιήσεις σχῆμα διὰ τοῦ ‘κύκλος’ ἐν τῷ συλλογισμῷ. ὁ δ’ ἐν μηδετέρῳ ἀληθὴς συλλογισμὸς.

35 ‘Ἀλλὰ δὴ, ὅθεν ὁ λόγος ἦλθε, πρότερον οἱ ἐν τοῖς μαθήμασι λόγοι πρὸς τὴν διάνοιαν εἰσιν ἢ οὐ; καὶ εἴ τιτι δοκεῖ πολλὰ σημαίνειν τὸ τρίγωνον, καὶ ἔδωκε μὴ ὡς τοῦτο τὸ σχῆμα ἐφ’ οὗ συνεπεράνατο ὅτι δύο ὀρθαί, πρότερον πρὸς τὴν διάνοιαν οὗτος διείλεκται τὴν ἐκείνου ἢ οὐ;

“Ἐτι εἰ πολλὰ μὲν σημαίνει τοῦνομα, ὁ δὲ μὴ νοεῖ μηδ’ οἶεται, πῶς
40 οὗτος οὐ πρὸς τὴν διάνοιαν διείλεκται; ἢ πῶς δεῖ ἐρωτᾶν πλὴν διδόντα διαιρέσιν, εἴ τ’ ἐρωτήσῃ τις εἰ ἐστὶ σιγῶντα λέγειν ἢ οὐ, ἢ ἐστὶ μὲν ὡς οὐ, ἐστὶ δ’ ὡς ναί, εἰ δὴ τις δοίη μηδαμῶς, ὁ δὲ διαλεχθεῖη, ἅρ’ οὐ πρὸς τὴν διάνοιαν διείλεκται; καίτοι ὁ λόγος δοκεῖ τῶν παρὰ τὸ ὄνομα εἶναι. οὐκ ἄρα ἐστὶ γένος τι λόγων τὸ πρὸς τὴν διάνοιαν. ἀλλ’ οἱ μὲν
45 πρὸς τοῦνομά εἰσι· καίτοι οὗτοι οὐ πάντες, οὐχ ὅτι οἱ ἔλεγχοι ἀλλ’ οὐδ’ οἱ φαινόμενοι ἔλεγχοι. εἰσὶ γὰρ καὶ μὴ παρὰ τὴν λέξιν φαινόμενοι ἔλεγχοι, οἷον οἱ παρὰ τὸ συμβεβηκὸς καὶ ἕτεροι.

Εἰ δὲ τις ἀξιοῖ διαιρεῖν, ὅτι ‘λέγω δὲ σιγῶντα λέγειν τὰ μὲν ὡδὶ τὰ δ’ ὡδί’, ἀλλὰ τοῦτό γ’ ἐστὶ πρῶτον μὲν ἄτοπον, τὸ ἀξιοῦν· ἐνίοτε γὰρ
50 οὐ δοκεῖ τὸ ἐρωτώμενον πολλαχῶς ἔχειν, ἀδύνατον δὲ διαιρεῖν ὁ μὴ οἶεται. ἔπειτα τὸ διδάσκειν τί ἄλλο ἔσται; φανερόν γὰρ ποιήσῃ ὡς ἔχει τῷ μήτ’ ἐσκεμμένῳ μήτ’ εἰδότε μήθ’ ὑπολαμβάνοντι ὅτι ἄλλως λέγεται· ἐπεὶ καὶ ἐν τοῖς μὴ διπλοῖς τί κωλύει τοῦτο παθεῖν; ‘ἄρα ἴσαι αἱ μονάδες ταῖς δυάσιν ἐν τοῖς τέτταρσιν; εἰσὶ δὲ δυάδες αἱ μὲν ὡδὶ ἐνοῦσαι αἱ δὲ
55 ὡδί.’ καὶ ‘ἄρα τῶν ἐναντίων μία ἐπιστήμη ἢ οὐ; ἐστὶ δ’ ἐναντία τὰ μὲν γνωστὰ τὰ δ’ ἄγνωστα.’ ὥστ’ ἔοικεν ἀγνοεῖν ὁ τοῦτο ἀξιῶν ὅτι ἕτερον τὸ διδάσκειν τοῦ διαλέγεσθαι, καὶ ὅτι δεῖ τὸν μὲν διδάσκοντα μὴ ἐρωτᾶν ἀλλ’ αὐτὸν δῆλα ποιεῖν, τὸν δ’ ἐρωτᾶν.

2 λόγους, ἑτερους] τοὺς ΤΑ || πρὸς] παρὰ Sophon. || 5 ἀλλ' om. C³ || ἐφ' . . . ἐρωτᾶσθαι Michael Eph.^c and Poste: οὐδενὸς ἐρωτᾶσθαι ἐφ' ᾧ (δ Α¹Β) MSS: ὁ οἰόμενος ἐρωτᾶν ἐφ' δ Α || 7 ἐφ' ᾧ] ἐφ' δ ABC¹Λ || ἔδωκεν] ἔδωκεν ὁ u || δὴ] δέ Α || 10 Ζήνων] excised by Waitz (in his text), by Emminger, and by Ross || 11 οὗτος] om. D: <ἄρ> οὗτος Ross || πρὸς . . . ἡ MSS, Α: καὶ πρὸς . . . καὶ Michael Eph.^p, Soph. || ἔσται] ἔστιν ΔΑ || 14 καὶ] καὶ μὴ Michael Eph.^c || 18 ἑτεροὶ] ἑτεροὶ οἱ u || 21 οἱ CuDAA¹Bc¹: οὐ Α²c³ Michael Eph.^c || 22 πάντας] πάντας εἶναι C || 24 τούτους] αὐτοὺς C || 25 αὐτὸν] om. D || 27 χρῆ] om. D || καὶ] om. C || 28 συλλογισμοῦ CuB²Λ: παραλογισμοῦ B¹D || 30 ἔσται] ἔστι C || τὴν ἀντίφασιν DAB¹C¹ Michael Eph.^c: om. AB²C²cu || 32 & ABCuD Michael Eph.^c: δ Sophon. Α || ἔχει ABDu: ἔχει Cc Michael Eph.^c Sophon. Α || 33 δοίη ἂν T Michael Eph.^c Soph.: δοῦναι ABCuDΛ || ὁ δὲ ὅτι] ὅτε δὲ D || ἡ] om. u || κύκλος Ross: κύκλου MSS || 37 ὡς] om. C || 40 οὐ] om. u || ἡ] καίτοι ὁ λόγος δοκεῖ τῶν παρὰ τὸ ὄνομα ἡ C || πλὴν] πρὶν u || διδόντα DAC Michael Eph.^c: διδόναι ABu || 41 εἰ τ' ἐρωτήσῃ AB¹C²u: εἴτα ἐρωτήσῃ B²C¹ Michael Eph.^c: εἴτ' ἐρωτήσῃ ΔΑ || εἰ] om. D¹ || 43 ὁ] οὗτος ὁ Michael Eph.^c || 44 ἀλλ' οἱ μὲν ABCuD Michael Eph.^c: ἀλλ' αἱ μὲν Α: ἄλλο c¹: ἄλλο τῶν c² || 45 καίτοι οὗτοι] καὶ τοιοῦτοι DABC²c² Michael Eph.^c: καὶ οὗτοι c¹ || 45-46 ἀλλ' . . . first ἔλεγχου] om. C || 46 μὴ] om. C || 53 παθεῖν AB Sophon.: ποιεῖν Michael Eph.^p: παθεῖν καὶ ποιεῖν D: παθεῖν ἡ ποιεῖν Α || ἄρα] ὡς ἄρα D || 54 δῶσιν ABC²uΛ: δῶσιν δῶσιν Michael Eph.^{cp} Sophon.: δῶσιν δῶσιν C¹D || 58 τὸν] τὸ Α¹

b. Aristotle, *Sophistici Elenchi* 177 B 7-9

Φανερόν δὲ καὶ ὅτι οὐ πάντες οἱ ἔλεγχοι παρὰ τὸ διττόν, καθάπερ τινέες φασιν.

70

Diogenes Laertius IV, 2 (I, p. 164, 18-20)

Οὗτος (sc. Σπεύσιππος) πρῶτος, καθά φησι Διόδωρος ἐν Ἀπομνημονευμάτων πρώτῳ, ἐν τοῖς μαθήμασιν ἐθεάσατο τὸ κοινὸν καὶ συναφείωσε καθ' ὅσον ἦν δυνατόν ἀλλήλοις.

71

Aristotle, *Anal. Post.* 88 B 21-29

Εἰ δὲ μήτ' ἐξ ἀπασῶν ὡς δεόν δείκνυσθαι ὅτι οὐν μήθ' οὕτως ἐτέρας ὥσθ' ἐκάστης ἐπιστήμης εἶναι ἐτέρας, λείπεται εἰ συγγενεῖς αἱ ἀρχαὶ πάντων, ἀλλ' ἐκ τῶνδ' αἱ μὲν ταδί, ἐκ δὲ τῶνδ' αἱ ταδί. φανερόν δὲ καὶ τοῦθ' ὅτι οὐκ ἐνδέχεται· δέδεικται γάρ ὅτι ἄλλαι ἀρχαὶ τῷ γένει εἰσὶν αἱ τῶν 5 διαφορῶν τῷ γένει. αἱ γὰρ ἀρχαὶ διτταί, ἐξ ὧν τε καὶ περὶ δ' αἱ μὲν οὐν ἐξ ὧν κοιναί, αἱ δὲ περὶ δ' ἴδιαι, οἷον ἀριθμός, μέγεθος.

1 μήθ' DM: μηδ' ABdn || 4 γὰρ] om. d || 5 δ] οὐ ABd Philop.^c || 6 δ] οὐ Ad¹ || μέγεθος Philop.: μεγέθους ABdn

72

Proclus, *In Euclidem*, pp. 77, 15-78, 10

"Ἡδὴ δὲ τῶν παλαιῶν οἱ μὲν πάντα θεωρήματα καλεῖν ἤξιωσαν, ὥς οἱ περὶ Σπεύσιππον καὶ Ἀμφίνομον, ἡγούμενοι ταῖς θεωρητικαῖς ἐπιστήμαις οἰκειοτέραν εἶναι τὴν τῶν θεωρημάτων προσηγορίαν ἢ τὴν τῶν προβλημάτων, ἄλλως τε καὶ περὶ αἰδίων ποιουμέναις τοὺς λόγους.
 5 οὐ γὰρ ἐστὶ γενέσεις ἐν τοῖς αἰδίοις, ὥστε οὐδὲ τὸ πρόβλημα χώραν ἐπὶ τούτων ἂν ἔχοι, γένεσιν ἐπαγγελλόμενον καὶ ποίησιν τοῦ μήπω πρότερον ὄντος, οἷον ἰσοπλεύρου τριγώνου σύστασιν, ἢ τετραγώνου δοθείσης εὐθείας ἀναγραφὴν, ἢ θέσιν εὐθείας πρὸς τῷ δοθέντι σημείῳ. ἄμεινον οὖν φασι λέγειν ὅτι πάντα ταῦτα ἐστὶ, τὰς δὲ γενέσεις αὐτῶν οὐ ποιη-
 10 τικῶς ἀλλὰ γνωστικῶς ὁρῶμεν ὥσανεὶ γιγνόμενα λαμβάνοντες τὰ αἰεὶ ὄντα, ὥστε καὶ πάντα θεωρηματικῶς ἐροῦμεν ἀλλ' οὐ προβληματικῶς λαμβάνεσθαι. οἱ δὲ ἀνάπαλιν πάντα προβλήματα λέγειν ἐδικαίουν ὥς οἱ περὶ Μέναιχμον μαθηματικοί, τὴν δὲ προβολὴν εἶναι διττὴν· κτλ.
 4 ποιουμέναις Grynaeus: ποιοῦνται M || 7 ἢ] om. M || 9 ταῦτα Tannery: ταῦτά Friedlein (with MSS?)

73

Proclus, *In Euclidem*, p. 179, 12-22

Δεῖ γὰρ δὴ πανταχοῦ τὰς ἀρχὰς τῶν μετὰ τὰς ἀρχὰς διαφέρειν τῇ ἀπλότητι, τῷ ἀναποδείκτω, τῷ αὐτοπίστῳ. καθόλου γὰρ, φησὶν ὁ Σπεύσιππος, ὧν ἡ διάνοια τὴν θήραν ποιεῖται τὰ μὲν οὐδεμίαν ποι-
 5 κίλην ποιησαμένη διέξοδον προβάλλει καὶ προευτρεπίζει πρὸς τὴν μέλ-
 λουσιν ζήτησιν καὶ ἔχει τούτων ἐναργεστέραν ἐπαφὴν μᾶλλον ἢ τῶν ὁρατῶν ἢ ὄψις, τὰ δὲ ἐκ τοῦ εὐθέως αἰρεῖν ἀδυνατοῦσα κατὰ μετάβασιν ἐπ' ἐκεῖνα διαβαίνουσα κατὰ τὸ ἀκόλουθον αὐτῶν ἐπιχειρεῖ ποιεῖσθαι τὴν θήραν.

6 αἰρεῖν Mullach: αἴρειν Friedlein (with MSS?) || 7 διαβαίνουσα later hand in M (above the line): διαβάλλουσα M

74

Proclus, *In Euclidem*, p. 181, 16-17 and 21-23

"Ἡδὴ δὲ οἱ μὲν πάντα αἰτήματα καλεῖν ἄξιουσιν, ὥσπερ καὶ προβλήματα τὰ ζητούμενα πάντα. . . . οἱ δὲ πάντα ἀξιώματα προσαγορεύουσιν, ὥσπερ δὴ καὶ θεωρήματα πάντα τὰ ἀποδείξεως δεόμενα.

75

Sextus, *Adv. Math.* VII, 145-146

Σπεύσιππος δέ, ἐπεὶ τῶνπραγμάτων τὰ μὲν ἐστὶν αἰσθητά, τὰ δὲ

νοητά, τῶν μὲν νοητῶν κριτήριον ἔλεξεν εἶναι τὸν ἐπιστημονικὸν λόγον, τῶν δὲ αἰσθητῶν τὴν ἐπιστημονικὴν αἴσθησιν. ἐπιστημονικὴν δὲ αἴσθησιν ὑπέλειπε καθεστάναι τὴν μεταλαμβάνουσαν τῆς κατὰ τὸν λόγον ἀλη-
 5 θείας. ὥσπερ γὰρ οἱ τοῦ αὐλητοῦ ἢ τοῦ ψάλτου δάκτυλοι τεχνικὴν μὲν εἶχον ἐνέργειαν, οὐκ ἐν αὐτοῖς δὲ προηγουμένως τελειουμένην, ἀλλ' ἐκ τῆς πρὸς τὸν λογισμὸν συνασκήσεως ἀπαρτιζομένην, καὶ ὡς ἡ τοῦ μουσικοῦ αἴσθησις ἐνέργειαν μὲν εἶχεν ἀντιληπτικὴν τοῦ τε ἡρμοσμένου καὶ τοῦ ἀναρμόστου, ταύτην δὲ οὐκ αὐτοφυῆ, ἀλλ' ἐκ λογισμοῦ περι-
 10 γεγонуῖαν, οὕτω καὶ ἡ ἐπιστημονικὴ αἴσθησις φυσικῶς παρὰ τοῦ λόγου τῆς ἐπιστημονικῆς μεταλαμβάνει τριβῆς πρὸς ἀπλανῆ τῶν ὑποκειμένων διάγνωσιν.

1 ἐστὶν N: om. LEς || 5 second τοῦ] om. ς || 6 ἐκ N: om. LEς || 8 ἐνέργειαν Bekker: ἐνέργειαν MSS

76

Boethius, *In Aristot. De Interpr.*, ed. sec. I, 1 (II, p. 24, 15-19)

Antiquiores vero quorum est Plato, Aristoteles, Speusippus, Xenocrates hi inter res et significationes intellectuum medios sensus ponunt in sensibilibus rebus vel imaginationes quasdam, in quibus intellectus ipsius origo consistat.

1 Speusippus] //usippus S: usippus S²FT-

77

Clement, *Stromata* II, 22, 133, 4 (II, p. 186, 19-23)

Σπεύσιππος τε ὁ Πλάτωνος ἀδελφιδοῦς τὴν εὐδαιμονίαν φησὶν ἔξιν εἶναι τελείαν ἐν τοῖς κατὰ φύσιν ἔχουσιν ἢ ἔξιν ἀγαθῶν, ἥς δὴ καταστάσεως ἅπαντας μὲν ἀνθρώπους ὀρεξίν ἔχειν, στοχάζεσθαι δὲ τοὺς ἀγαθοὺς τῆς ἀοχλησίας. εἶεν δ' ἂν αἱ ἀρεταὶ τῆς εὐδαιμονίας ἀπεργα-
 5 στικάί.

78

a. Cicero, *Tusc. Disp.* V, 10, 30

Non igitur facile concedo neque Bruto meo neque communibus magistris nec veteribus illis, Aristoteli Speusippo Xenocrati Polemoni, ut, cum ea quae supra enumeravi in malis numerent, idem dicant semper beatum esse sapientem.

1 communibus] commonibus GV

b. Cícero, *Tusc. Disp.* V, 13, 39

Hic igitur si est excultus et si eius acies ita curata est, ut ne caecaretur erroribus, fit perfecta mens, id est absoluta ratio, quod est idem virtus. et si omne beatum est, cui nihil deest et quod in suo genere expletum atque cumulatam est, idque virtutis est
 5 proprium, certe omnes virtutis compotes beati sunt. et hoc quidem mihi cum Bruto convenit, id est cum Aristotele Xenocrate Speusippo Polemone.

1 si est] added by G^a || ne] nec K || 5 omnes] omnis X || 6-7 Speusippo] pseusippo X (pseups. K)

c. Cicero, *Tusc. Disp.* V, 31, 87

Sequitur igitur horum ratione vel ad supplicium beata vita virtutem cumque ea descendet in taurum Aristotele Xenocrate Speusippo Polemone auctoribus nec eam minis aut blandimentis corrupta deseret.

1 horum 5: honorum X || 3 minis aut blandimentis Bentley: minis blandimentisve Pohlenz: minimis blandimentis MSS: minis blandimentis Klotz (but the asyndeton would be awkward, cf. Pohlenz *ad loc.*)

d. Cicero, *De Legibus* I, 13, 37-38

Quocirca vereor committere ut non bene provisum et diligenter explorata principia ponantur, nec tamen ut omnibus probentur — nam id fieri non potest —, sed ut eis qui omnia recta atque honesta per se expetenda duxerunt, et aut nihil omnino in bonis numerandum nisi quod per se ipsum laudabile esset, aut certe nullum habendum magnum bonum, nisi quod vere laudari sua sponte posset: iis omnibus, sive in Academia vetere cum Speusippo Xenocrate Polemone manserunt, sive Aristotelem et Theophrastum, cum illis congruentis re, genere docendi paulum differentis, secuti
 10 sunt, sive ut Zenoni visum est rebus non commutatis inmutaverunt vocabula, sive etiam Aristonis difficilem atque arduam, sed iam tamen fractam et convictam sectam secuti sunt, ut virtutibus exceptis atque vitiis cetera in summa aequalitate ponerent: iis omnibus haec quae dixi probentur.

4 expetenda H: expectanda AB || 9 cum H: dum AB || 10 commutatis] communicatis AB || 14 probentur Turnebus: probantur V

e. Seneca, *Epist. Mor.* 85, 18

Xenocrates et Speusippus putant beatum vel sola virtute fieri posse, non tamen unum bonum esse quod honestum est.

79

Plutarch, *De Comm. Notit. Adv. Stoic.* 1065 A (pp. 702 and 704)

Ἄξιον δ' ἀναλαβεῖν τὸ δόγμα ταῖς ἐκείνου (sc. Χρυσίππου) λέξεσιν, ἵνα καὶ μάρτης πῶς οἱ τοῦ Ξενοκράτους καὶ Σπευσίππου κατηγοροῦντες ἐπὶ τῷ μὴ τὴν ὑγίειαν ἀδιάφορον ἡγεῖσθαι μηδὲ τὸν πλοῦτον ἀνωφελὲς ἐν τίνι τόπῳ τὴν κακίαν αὐτοὶ τίθενται καὶ τίνας λόγους περὶ αὐτῆς
5 διεξίλασιν.

2 πῶς οἱ τοῦ Wytttenbach: πῶς οἱ τοῦ Leonicus: πῶς ὅπου EB: οἱ τοῦ (without πῶς) edit. Basiliensis

80

a. Aristotle, *Eth. Nicom.* 1153 B 1-7

Ἄλλὰ μὴν ὅτι καὶ ἡ λύπη κακόν, ὁμολογεῖται, καὶ φευκτόν· ἡ μὲν γὰρ ἀπλῶς κακόν, ἡ δὲ τῷ πῇ ἐμποδιστική. τῷ δὲ φευκτῷ τὸ ἐναντίον ἢ φευκτόν τι καὶ κακόν, ἀγαθόν. ἀνάγκη οὖν τὴν ἡδονὴν ἀγαθόν τι εἶναι. ὥς γὰρ Σπεύσιππος ἔλυεν, οὐ συμβαίνει ἡ λύσις, ὥσπερ τὸ μεῖζον
5 τῷ ἐλάττονι καὶ τῷ ἴσῳ ἐναντίον· οὐ γὰρ ἂν φαίη ὅπερ κακόν τι εἶναι τὴν ἡδονήν.

1 first καὶ] om. K^bM^b || 3 τι] τε L^b || κακόν] κακὸν ἢ K^b: κακὸν ἢ K^b (after corr.) and Γ || 4 ἔλυεν] ἔλεγεν M^b

b. Aspasius, *In Eth. Nic.*, p. 150, 3-8 and 19-26 (on 1153 B 1 ff.)

Σπεύσιππον δὲ φασιν οὕτω δεικνύειν ὅτι ἡδονὴ ἀγαθόν ἐστιν· τὸ ἐναντίον ἀγαθῷ κακόν· ἐναντίον δὲ ἡ λύπη, κακὸν οὖσα, τῇ ἡδονῇ· ἀγαθὸν ἄρα. ὁ δὲ Ἀριστοτέλης οὐχ οὕτως τὸν λόγον ἡρώτηκεν, ἀλλ' ἐπηρωρωσάτο εἰπών· τὸ ἐναντίον φευκτῷ ἢ φευκτὸν ἀγαθόν· ἡ δὲ ἡδονὴ ἐναντίον
5 τῇ λύπῃ φευκτῷ οὐσῇ καὶ οὐκ ἔστι κακόν (οὐδεὶς γὰρ <ἂν> εἴποι κακὸν τὴν ἡδονήν)· ἀγαθὸν ἄρα. κτλ.

2 ἀγαθῷ Heylbut: ἀγαθόν N: ἀγαθοῦ Z || 4 φευκτῷ . . . ἀγαθόν Heylbut: φευκτῷ φευκτόν ἢ ἀγαθόν ZN || 5 ἂν Diels: om. MSS || εἴποι Heylbut: εἴπη ZN

c. [Heliodorus], *In Eth. Nic.*, p. 158, 20-30 (on 1153 B 1 ff.)

Φανερόν ὅτι ἀνάγκη πᾶσα τὸ ἐναντίον τῇ λύπῃ τὴν ἡδονήν, τὴν μὲν ἀπλῶς φευκτὴν εἶναι, τὴν δὲ πῇ· ἀνάγκη γὰρ τῷ ἀπλῶς κακῷ ἀπλῶς ἀγαθὸν εἶναι ἐναντίον, καὶ τῷ πῇ κακῷ τὸ πῇ ἀγαθόν· οὐ γὰρ ἡ Σπευσίππου λύσις, καθ' ἣν ἐνιστάμενος λύειν ἐπιχειρεῖ τόνδε τὸν λόγον,
5 συμβαίνει τῇ ἀληθείᾳ. φησὶ γὰρ, ὅτι καθάπερ τὸ μεῖζον καὶ τὸ ἔλαττον ἐναντία ἐστὶ τῷ ἴσῳ καὶ ἐπὶ τῶν ἀρετῶν τὰ παρ' ἐκάτερα ἐναντία, τὸν αὐτὸν δὴ τρόπον καὶ τῇ ἀλυπία ἀντίκειται ἡ ἡδονὴ καὶ λύπη, ἡ μὲν ὥς μεῖζον, ἡ δὲ λύπη ὥς ἔλαττον, καὶ ἔστιν ἡ μὲν ἀλυπία ἀγαθόν, ἡ δὲ

ἡδονὴ καὶ ἡ λύπη κακόν· οὗτος γὰρ ὁ λόγος παντελῶς ἄδοξός ἐστιν·
 10 οὐδενὶ γὰρ ἡ ἡδονὴ κακὸν δοκεῖ· οὐδεὶς γὰρ ἂν φαίη τὴν ἡδονὴν αὐτὴν,
 ὅπερ ἐστὶ κακὸν εἶναι.

d. Anonymous, *In Eth. Nic.*, pp. 452, 26-453, 2 (on 1153 B 1 ff.)

Εἰ οὖν ἡ λύπη κακὸν καὶ φευκτόν, τῷ δὲ φευκτῷ καθὸ φευκτόν ἐστιν
 καὶ κακόν, ἐναντίον ἐστὶν τὸ ἀγαθόν, λείπεται ἄρα τὴν ἡδονὴν ἀγαθὸν
 εἶναι. ἐπὶ γὰρ τῶν ἀμέσων ἐναντίων ἐὰν θάτερον τὸ τῶν ἐναντίων κακὸν
 ἐστὶν, θάτερον ἔσται ἀγαθόν. ἐνδέχεται γὰρ εἶναι καὶ κακόν, οἷον ἀν-
 5 δρεία δειλία καὶ θρασύτης. ἀντίκειται γὰρ τῇ δειλίᾳ καὶ ἡ ἀνδρεία καὶ
 ἡ θρασύτης. ἐνστασις τοῦ Σπευσίππου. ἔλεγεν ὁ Σπεύσιππος ὅτι ὥς τὸ
 μεῖζον ἀντίκειται τῷ ἐλάττω καὶ τῷ ἴσῳ, καὶ τὰ μὲν ἄκρα, ἥτοι τὸ
 μεῖζον καὶ τὸ ἐλάττω, ἐστὶν κακά, τὸ δὲ μέσον, ἥτοι τὸ ἴσον, ἀγαθόν
 ἐστὶν, οὕτως καὶ ἡ ἡδονὴ ἀντίκειται τῇ ἀλυπσίᾳ καὶ τῇ λύπῃ, καὶ τὰ μὲν
 10 ἄκρα, ἥτοι ἡ λύπη καὶ ἡ ἡδονή, εἰσὶ κακά, τὸ δὲ μέσον, ἥτοι ἡ ἀλυπία,
 ἀγαθόν ἐστὶν. ὥς γὰρ ὁ Σπεύσιππος ἔλυεν, ὅτι καὶ ἡ ἡδονὴ καὶ ἡ λύπη
 κακόν ἐστὶν, ἡ δὲ ἀλυπία ἀγαθόν, οὐ συμβαίνει ἡ λύσις, ὅτι οὐχ ὡμολόγη-
 ται τοῦτο πᾶσι. πάντες γὰρ ὁμολογοῦσι τὴν ἡδονὴν ἀγαθὸν εἶναι, καὶ
 οὐδεὶς ἂν φαίη τὴν ἡδονὴν εἶναι ὅπερ κακόν, ἥτοι ὥς ἐν γένει ἀνάγεσθαι
 15 τῷ κακῷ, καὶ εἶδος τοῦ κακοῦ τὴν ἡδονὴν εἶναι, ἥτοι εἶναι κακόν τὴν
 ἡδονὴν οὐδεὶς ὁμολογεῖ.

8 κακά Aldine ed.: κακόν B || 12 ἀλυπία B (after corr. from λύπη)

e. Scholion in *Cod. Paris. Graec.* 1854 on *Eth. Nic.* 1153 B 5 ff. =
 Cramer, *Anec. Paris.*, I, p. 219, 16-21

Ὁ Σπεύσιππος ἔλεγε τὴν λύπην καὶ τὴν ἡδονὴν ἐναντία κακὰ εἶναι·
 μέσον δὲ κατάστημα τὴν ἀλυπσίαν· ἐλέγχεται δὲ κακῶς λέγων· οὐ γὰρ
 πᾶσα εὐρίσκεται ἡδονὴ φαύλη, ἀλλ' εἰσὶ καὶ ἡδοναὶ ἀγαθαί, οἷον αἱ τῶν
 σωφρόνων· οὐδὲ πανταχοῦ· ἢ πάντα ἔμμεσά εἰσι· ἵνα τῇ φυγῇ τῶν
 5 ἄκρων τὸ μέσον προκρίνωμεν.

81

a. Aristotle, *Eth. Nic.* 1173 A 5-28

Οὐκ ἔοικε δὲ οὐδὲ περὶ τοῦ ἐναντίου καλῶς λέγεσθαι. οὐ γὰρ φασιν,
 εἰ ἡ λύπη κακόν ἐστι, τὴν ἡδονὴν ἀγαθὸν εἶναι· ἀντικεῖσθαι γὰρ καὶ
 κακὸν κακῷ καὶ ἄμφω τῷ μηδετέρῳ — λέγοντες ταῦτα οὐ κακῶς, οὐ
 μὴν ἐπὶ γε τῶν εἰρημένων ἀληθεύοντες. ἀμφοῖν γὰρ ὄντοιν <τῶν> κακῶν
 5 καὶ φευκτὰ ἔδει ἄμφω εἶναι, τῶν μηδετέρων δὲ μηδέτερον ἢ ὁμοίως·
 νῦν δὲ φαίνονται τὴν μὲν φεύγοντες ὥς κακόν, τὴν δ' αἰρούμενοι ὥς
 ἀγαθόν· οὕτω δὲ καὶ ἀντίκειται. οὐ μὴν οὐδ' εἰ μὴ τῶν ποιότητων

- ἐστὶν ἡ ἡδονή, διὰ τοῦτ' οὐδὲ τῶν ἀγαθῶν· οὐδὲ γὰρ αἱ τῆς ἀρετῆς ἐνέργειαι ποιότητές εἰσιν, οὐδ' ἡ εὐδαιμονία. λέγουσι δὲ τὸ μὲν ἀγαθὸν
 10 ὠρίσθαι, τὴν δ' ἡδονὴν ἀόριστον εἶναι, ὅτι δέχεται τὸ μᾶλλον καὶ τὸ ἥττον. εἰ μὲν οὖν ἐκ τοῦ ἡδεσθαι τοῦτο κρίνουσι, καὶ περὶ τὴν δικαιοσύνην καὶ τὰς ἄλλας ἀρετάς, καθ' ἃς ἐναργῶς φασι μᾶλλον καὶ ἥττον τοὺς ποιοὺς ὑπάρχειν καὶ <πράττειν> κατὰ τὰς ἀρετάς, ἔσται ταῦτά· δίκαιοι γὰρ εἰσι μᾶλλον καὶ ἀνδρεῖοι, ἔστι δὲ καὶ δικαιοπραγεῖν καὶ σωφρονεῖν
 15 μᾶλλον καὶ ἥττον. εἰ δὲ ταῖς ἡδοναῖς, μὴ ποτ' οὐ λέγουσι τὸ αἴτιον, ἂν ὦσιν αἱ μὲν ἀμιγεῖς αἱ δὲ μικταί. καὶ τί κωλύει, καθάπερ ὑγίεια ὠρισμένη οὕσα δέχεται τὸ μᾶλλον καὶ τὸ ἥττον, οὕτω καὶ τὴν ἡδονήν; οὐ γὰρ ἡ αὐτὴ συμμετρία ἐν πᾶσιν ἐστίν, οὐδ' ἐν τῷ αὐτῷ μία τις ἀεί, ἀλλ' ἀνιεμένη διαμένει ἕως τινός, καὶ διαφέρει τῷ μᾶλλον καὶ ἥττον. τοιοῦτον
 20 δὴ καὶ τὸ περὶ τὴν ἡδονὴν ἐνδέχεται εἶναι.

2 καὶ L^bΓ, Michael Eph. || 3 μηδετέρῳ Γ, Michael Eph.: μηδέτερα K^bL: μηδέτερον M^b || ταῦτα οὐ] ταῦτα δ' οὐ K^bΓ || 4 γὰρ] μὲν γὰρ L^b || ὄντων] ὄντων K^b || τῶν Bywater: om. MSS || 5 μηδέτερον] ἡ ἕτερον K^b || 7 ἀντίκειται] ἀντίκεινται M^b || 8 ἡ] om. K^b || 10 second τὸ] om. L^b || 13 καὶ] om. K^b || πράττειν supplied by Vahlen || ταῦτά] ταῦτα K^bM^b: τὸ αὐτὸ L^bΓ || 15 δὲ K^b: δ' ἐν editors || 16 καὶ τί κωλύει Bywater: καὶ τί κωλύεται K^b: τί δὲ κωλύει Γ: τί κωλύει δὲ L^b: τί γὰρ κωλύει M^b || 19 ἀνιεμένη] ἀνιεμένη K^b

b. Michael Ephesius, *In Eth. Nic.*, pp. 538, 35-539, 19 (on 1173 A 5 ff.)

- ‘Ὁ ἐκ τοῦ ἐναντίου συνιστῶν τὴν ἡδονὴν ἀγαθὸν λόγος τοιοῦτος ἦν· εἰ ἡ λύπη ἐναντίον οὕσα τῇ ἡδονῇ κακὸν ἐστίν, ἀγαθὸν ἄρα ἡ ἡδονή. πόθεν δ' ὅτι ἡ λύπη κακόν; ἐκ τοῦ πάντας φεύγειν αὐτήν. πρὸς τοῦτον τὸν λόγον τὸν ἐκ τοῦ ἐναντίου συνιστῶντα τὴν ἡδονὴν ἀγαθὸν ἐνίστατο
 5 ὁ Σπεύσιππος λέγων· ‘οὐκ ἀνάγκη, ἐπειδὴ κακὸν ἐστίν ἡ λύπη, ἀγαθὸν εἶναι τὴν ἀντικειμένην αὐτῇ ἡδονήν’· οὐ γὰρ πᾶν τὸ ἀντικείμενον κακῷ ἀγαθόν ἐστίν. ἀντίκειται γὰρ τῇ θρασύτητι κακῷ ὄντι ἡ δειλία καὶ οὐκ ἔστιν ἀγαθὸν ἡ δειλία ἀλλὰ κακόν, καὶ τῇ ἡλιθιότητι κακῇ οὕσῃ ἀντίκειται ἡ ἀκολασία κακὸν οὕσα καὶ αὕτη ὁμοίως, καὶ ἡ ἀνελευθεριότης τῇ
 10 ἀσωτίᾳ κακαὶ οὕσαι ἀμφοτέραι. ἀντίκειται οὖν, φησὶ Σπεύσιππος, καὶ κακὸν κακῷ καὶ ἄμφω τῷ μηδετέρῳ, τουτέστι καὶ ἄμφω τὰ κακὰ τῷ ἀγαθῷ. μηδέτερον γὰρ τὸ ἀγαθὸν εἶπεν· αἱ γὰρ ἀρεταὶ μεσότητες οὕσαι οὐδέτερον τῶν ἄκρων εἰσίν. ἡ γὰρ ἀνδρεία οὔτε δειλία οὔτε θρασύτης ἐστὶ, καὶ ἡ σωφροσύνη οὔτε ἀκολασία οὔτε ἡλιθιότης, καὶ ἐπὶ τῶν ἄλλων
 15 ἀρετῶν ὁμοίως. καὶ λέγει ταῦτα καλῶς· ἀληθὲς γὰρ ἐστὶ τὸ λέγειν, ὅτι ἀντίκειται κακὸν κακῷ καὶ ἀμφοτέρα τὰ κακὰ τῷ ἀγαθῷ. τοῦτο μὲν οὖν λέγουσι καλῶς· τὸ δ' ὅτι ἡ ἡδονὴ ὡς κακὸν κακῷ ἀντίκειται τῇ λύπῃ λέγουσιν οὐ καλῶς. οὐ γὰρ ἀντίκειται ἡ ἡδονὴ τῇ λύπῃ ὡς κακὸν κακῷ

ἀλλ' ὥς ἀγαθὸν κακῶ. εἰ γὰρ ἦν κακὸν ἢ ἡδονή, ἦν καὶ φευκτὸν καὶ
 20 μισητὸν ὥς ἡ λύπη. νῦν δὲ τὴν μὲν λύπην φεύγει πάντα καὶ ἀποστρέφεται
 ὥς κακόν, διώκει δὲ καὶ ἐπιτρέχει τὴν ἡδονὴν ὥς ἀγαθόν.

82

Aristotle, *Anal. Post.* 92 A 20-27

Κἂν ἐξ ὑποθέσεως δὲ δεικνύη, οἷον εἰ τὸ κακῶ ἐστὶ τὸ διαιρετῶ εἶναι,
 τὸ δ' ἐναντίῳ τὸ τῶ ἐναντίῳ <ἐναντίῳ> εἶναι, ὅσοις ἔστι τι ἐναντίον· τὸ
 δ' ἀγαθὸν τῶ κακῶ ἐναντίον καὶ τὸ ἀδιαίρετον τῶ διαιρετῶ· ἔστιν ἄρα
 τὸ ἀγαθῶ εἶναι τὸ ἀδιαίρετῳ εἶναι. καὶ γὰρ ἐνταῦθα λαβὼν τὸ τί ἦν
 5 εἶναι δείκνυσι· λαμβάνει δ' εἰς τὸ δεῖξαι τὸ τί ἦν εἶναι. 'ἕτερον μέντοι'.
 ἔστω· καὶ γὰρ ἐν ταῖς ἀποδείξεσιν, ὅτι ἐστὶ τόδε κατὰ τοῦδε· ἀλλὰ μὴ
 αὐτό, μηδὲ οὐδ' αὐτὸς λόγος, καὶ ἀντιστρέφει.

1 δι] om. d || εἰ] om. n || first τὸ] τῶ Adn² || τὸ] τῶ d || 2 first τὸ Bonitz:
 τῶ MSS Philop.^c || third ἐναντίῳ suppl. by Bonitz and is perhaps the reading
 of Eustr.: om. MSS Them., Philop. || 3 ἀδιαίρετον τῶ διαιρετῶ] διαιρετὸν τῶ
 ἀδιαίρετῳ d || 4 first τὸ] om. Adn || second τὸ Bde Them.: τῶ An || 5 λαμβάνει
 B² Them.: λαμβάνειν ABdn || μέντοι Aldine ed.: μέν τι ABdn Eustr.: τι n² ||
 7 αὐτό d²n Eustr.: αὐτῶ Abd || ὁ] om. dn¹

83

Theophrastus, *Metaphysics* II A 18-26

Τὸ δ' ὅλον σπάνιον τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν, πολὺ δὲ πλῆθος εἶναι
 τὸ κακόν, οὐκ ἐν ἀοριστίᾳ δὲ μόνον καὶ οἷον ὕλης εἶδει, καθά περ τὰ
 τῆς φύσεως, ἀμαθεστάτου. εἰκῇ γὰρ οἱ περὶ τῆς ὅλης οὐσίας λέγοντες
 ὥσπερ Σπεύσιππος σπάνιον τι τὸ τίμιον ποιεῖ τὸ περὶ τὴν τοῦ μέσου
 5 χώραν, τὰ δ' ἄκρα καὶ ἐκατέρωθεν. τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν ὄντα.

1 τι] τε J corr. CΣ || εἶναι τὸ κακόν u: ἡ τὸ κακόν P: ἡ τὸ κακόν JC: εἰ τὸ κακόν
 Σ: εἰ τοῦ κακοῦ Usener || 2 οὐκ ἐν Zeller: οὐκ ἡ J: οὐκ εἰ other MSS: ἐν Usener ||
 ἀοριστίᾳ Usener: ἀοριστία (ἀριστία R¹) MSS || εἶδει] εἶδη P: εἶδη Σ || καθά περ
 τὰ] καθάπερ τοῦ V^a: καθαιρεῖν τὰ Usener || 3 ἀμαθεστάτου] ἀμαθέστατον
 BHu || εἰκῇ γὰρ Sylburg: εἰ· καὶ γὰρ P: καὶ γὰρ J: εἰ γὰρ καὶ C: εἰ καὶ γὰρ Σ ||
 4 Σπεύσιππος] πεύσιππος J: σπεύσιππος C || 5 τὰ δ'] τὰ τ' Gomperz || καὶ]
 Gomperz would delete it || ἐκατέρωθεν] ἐκατέρω Σ

84

Aulus Gellius, *Noctes Atticae* IX, 5, 4

Speusippus vetusque omnis Academia voluptatem et dolorem
 duo mala esse dicunt opposita inter sese, bonum autem esse,
 quod utriusque medium foret.

2 autem esse Fγ: emesse ZB: tamen esse Q

85

Macrobius, *Saturnalia* I, 17, 7-8

Apollinis nomen multiplici interpretatione ad solem refertur, cuius rei ordinem pergam. Plato solem Ἀπόλλωνα cognominatum scribit ἀπὸ τοῦ ἀποπάλλειν τὰς ἀκτῖνας, id est a iactu radiorum; Chrysippus Apollinem, ὥς οὐχὶ τῶν πολλῶν καὶ φαύλων οὐσιῶν τοῦ
 5 πυρὸς ὄντα, primam enim nominis litteram retinere significationem negandi, ἣ ὅτι μόνος ἐστὶ καὶ οὐχὶ πολλοί, nam et Latinitas eum, quia tantam claritudinem solus obtinuit, solem vocavit. Speusippus, quod ex multis ignibus constet vis eius ὥς ἀπὸ πολλῶν οὐσιῶν πυρὸς αὐτοῦ συνεστῶτος, Cleanthes etc.

86

Acad. Index Hercul. col. VI, 34-38 = T 2, 7-11

Τάσδε θεαῖσι θεὰς Χάριτας Μούσαις ἀνέθηκεν
 Σπεύσιππος λογίων εἵνεκα δῶρα τελῶν.

87

a. Diogenes Laertius III, 44 (I, pp. 139, 24-140, 2); Anthol. Pal. VII, 61; Anthol. Plan. III^a 28, 2 f. 42r

Γαῖα μὲν ἐν κόλπῳ κρύπτει τόδε σῶμα Πλάτωνος
 ψυχὴ δ' ἀθάνατον τάξιν ἔχει μακάρων
 υἱοῦ Ἀρίστωνος, τόν τις καὶ τηλόθι ναίων
 τιμᾷ ἀνὴρ ἀγαθὸς θεῖον ἰδόντα βίον.

1 γαῖα . . . Πλάτωνος over erasure in Plan. || κόλπῳ Diog. Laert.: κόλποις Anthol. Pal. and Plan. || 2 ἀθάνατον Diog. Laert. B and Anthol. Pal.: ἀθανάτων Diog. Laert. FP and Anthol. Plan.

b. Anthol. Plan. III^b 26, 7 f. 96v = Anthol. Graec., Suppl. Plan., XVI, 31; E 56; Ir. 105

Σπευσίππου

Σῶμα μὲν ἐν κόλποις κατέχει τόδε γαῖα Πλάτωνος
 ψυχὴ δ' ἰσόθεον τάξιν ἔχει μακάρων.

Title: Anthol. Plan.: om. E || 1 κόλποις Anthol. Plan.: κόλπῳ E || 2 ἰσόθεον E: ἰσοθέων Anthol. Plan. (from ἰσόθεον): ἰσόθεος Bergk

COMMENTARY ON TESTIMONIA

T 1

1-3 Τὰ . . . Σπεύσιππος. This is the transition from the life of Plato, a synthesis of several sources that stands by itself (cf. Wilamowitz, *Antigonos*, p. 45; Leo, *Biographie*, pp. 54-56), to the biographies of Speusippus and other members of the Academy, which seem to depend, in part at least, on a history of the school. Cf. on T 1-2 *infra*.

2-3 διεδέξατο . . . Σπεύσιππος. It is the unanimous testimony of our sources that Speusippus succeeded Plato as head of the Academy, most probably at the latter's death (cf. on lines 4-5 *infra*; on F 28, line 2 cf. comm. *ad loc.*). On the diverse hypotheses concerning the choice of Speusippus as head of the Academy, cf. pp. 8-11 *supra*.

Σπεύσιππος. The name is rare, and few persons who bore it are known from Athens up to ca. 150 B.C.¹ Fischer, p. 11 takes the name to refer to the Homeric virtue of "*in equis regendis incitandisque*." Pape-Benseler, *Wörterbuch der griech. Eigennamen*, s.v. interpret it to mean "swift horse." However interpreted, the name may have prompted, or may have been a source of confirmation for, some of the anecdotes hostile to Speusippus. Cf. on lines 8-9 *infra*.

3 Εὐρυμέδοντος. Nothing else is known about Speusippus' father, Eurymedon of Myrrhinous. Since Speusippus was born ca. 410/08

¹ They are: The councillor in 415 B.C. mentioned by Andocides (cf. Kirchner, *P.A.* 12845); a landowner at Besa ca. 341/0 B.C. (cf. *Hesperia* 19 [1950], p. 255, Nr. 18, line 26); Speusippus of Azenia, an ephebos in the archonship of Antiphon (cf. *Hesperia* 7 [1938], p. 112, Nr. 20, line 57), ca. 259 B.C. (cf. B. D. Meritt, *Hesperia* 26 [1957], pp. 210-211 [this Speusippus escaped the attention of Davies, *Ath. Prop. Fam.*, p. 334]); his grandson Speusippus of Azenia, on whose behalf his brother Alexiou contributed in 183/2 B.C. (cf. *I.G.* II², 2332, lines 11-15; Kirchner, *P.A.* 12846); and an archon who may have been either the same as the previous Speusippus or a close relative of his (cf. S. Dow, *Prytaneis* [*Hesperia*, Suppl. I, 1937], p. 125, Nr. 65 with B. D. Meritt, *The Athenian Year* [Berkeley and Los Angeles, 1961], pp. 236-237, under years 177/6 and 153/2). From outside Athens Diogenes Laertius (T 1, line 70) mentions one homonym only, an Alexandrian physician. On yet another Speusippus cf. on T 1, line 21 *infra*.

B.C. (cf. p. 7 *supra*), his father could hardly have been the general Εὐρυμέδων Θουκλέους, who died in Sicily in 413 B.C. (cf. Davies, *Ath. Prop. Fam.* p. 334 with references). Nor is it likely, on chronological grounds, that he was identical with the Eurymedon of Myrrhinous named in Plato's will (Diog. Laert. III, 42) as a landowner in Eiresidai and (after Speusippus) as a trustee (Diog. Laert. III, 43 = T 37), as Fischer, p. 11 believes he is (cf. *contra* Zeller, II, i, p. 986, n. 3). It is probable, however, that the Eurymedon mentioned last was a close relative of Speusippus (cf. Davies, *op. cit.*).

Μυρρινούσιος. The deme Myrrhynous was in the phyle Pandionis.

4 υἱὸς . . . Πωτῶνῃς. Wilamowitz, *Platon*, I, pp. 35-36 thinks that Potone was older than Plato. Since, however, Adeimantus, certainly, and Glaucon, probably, were older than Plato (cf. on F 1 *infra*) who, at the latest, was born in 428/7 B.C. (cf. Davies, *Ath. Prop. Fam.* p. 333), and since Speusippus must have been born ca. 410/08 B.C., it seems more probable than not that Potone was the youngest child of Ariston and Perictione. The correct spelling is probably Πωτῶνῃ rather than Ποτῶνῃ, cf. the Basle edition of Diog. Laert. III, note on III, 1.

4-5 καὶ ἐσχολάρχησεν . . . Ὀλυμπιάδος. Diogenes' statement that Speusippus was head of the Academy for eight years, beginning in Olymp. 108 (348/4 B.C.), comes from Apollodorus (*FGH* 244 F 344a). The same duration of his headship is given also by the *Acad. Index Hercul.*, col. VI, 39-40 (p. 38 [Mekler]) = T 2, lines 12-13), probably on the authority of Philochorus (cf. on T 2, lines 3-13 *infra*). If this is so, it is possible that Philochorus is the ultimate source of Apollodorus himself. The anonymous chronicle extant in *Oxyrh. Pap.*, I, 12 (= *FGH* 255, § 3 = T 6) gives Olymp. 108, 1 and the archonship of Theophilus (i.e. 348/7 B.C.) both as the year of Plato's death and as the beginning of Speusippus' headship of the Academy. We may therefore infer that Speusippus succeeded Plato at the latter's death. On Plato's death in the archonship of Theophilus cf. also Philochorus *FGH* 328 F 223, *Acad. Index Hercul.*, col. II, 33-34 (p. 20 [Mekler]), Dionysius of Halic., *Ad Ammaeum* I, 5, Diog. Laert. V, 9. On 348/7 as the year of Plato's death cf. also Theopompus *FGH* 115 F 294, Hermippus *FHG* III, p. 43, Nr. 33 = frag. 41 (Wehrli), Favorinus F 13 (Mensching) = frag. 43 (Barigazzi).

If Speusippus became head of the Academy in 348/7 and held that position for eight years, then the latest possible year for the end of his headship is 340/39. Yet Xenocrates is said to have succeeded him in 339/8 (cf. T 7 and comm. *ad loc.*).

5-6 Χαρίτων . . . ἰδρυθέντι. Cf. on T 2, lines 3-6 *infra*.

7-10 καὶ ἔμεινε . . . γάμον. The words καὶ ἔμεινε μὲν ἐπὶ τῶν αὐτῶν Πλάτωνι δογματῶν, which reflect the view of the early Academy as allegedly “dogmatic” (cf. the next note), serve merely as foil for the following contrast of Speusippus’ with Plato’s character (οὐ μὴν τό γ’ ἥθος διέμεινε τοιοῦτος, sc. οἷος ὁ Πλάτων). Speusippus was allegedly prone to anger and easily overcome by pleasures, the two vices that the two anecdotes that follow are intended to illustrate.

7 καὶ ἔμεινε . . . δογματῶν. Speusippus’ doctrines are notoriously at variance with those of Plato (cf. esp. pp. 12 ff. *supra*). This statement of Diogenes goes ultimately back to a source that sees the Old Academy from Plato to Polemon and Crates as “dogmatic” in contrast to the scepticism of the New Academy from Arcesilaus onward. Cf. further on T 15 and T 20 *infra*.

8 ὀργίλος. “Irascible,” “prone to anger.” Other than being echoed by Suidas (T 3, εἰς ἄκρον ὀξύθυμος), who in this probably depends ultimately on Diogenes, this is nowhere else said of Speusippus. It is one of the stock charges against philosophers in that it points to the absence of σωφροσύνη in the very man who is supposed to have that virtue. In *Acad. Index Hercul.*, col. VII, 10-17 (= T 2, lines 27-34) Speusippus’ character is contrasted to Xenocrates’ σωφροσύνη.

ἡδονῶν ἥττων ἦν. This charge against Speusippus seems to be found also in the *Acad. Index Hercul.*, where it is stated in connection with the attitude of the members of the Academy on the election of Xenocrates as head of the school (cf. T 2, lines 27-34 with note *ad loc.*). The charge of φιληδονία is common, particularly against philosophers (cf. e.g. Athenaeus VII, 278 D ff.). In Speusippus’ case it may have been based on the “authority” of the letter, allegedly by Dionysius II, that Diogenes himself cites in lines 13-16 *infra*. For Athenaeus (cf. T 39a-b with comm. *ad loc.*) twice cites the same letter by “Dionysius” and specifically connects with it the three

charges against Speusippus that are mentioned and/or implied by Diogenes himself: φιληδονία, φιλαργυρία, and love of Lastheneia (cf. also on lines 9-10, 11-16, and 11-12 *infra*). It is therefore quite likely that Diogenes and Athenaeus have ultimately a common source,² and this same or a similar source may also be behind the statement by the author of the *Acad. Index Hercul.* (cf. on T 2, lines 27-34 *infra*). The tendency of Hellenistic biographical writers to invent anecdotes and charges in order to illustrate the incongruity of a philosopher's doctrines with his life is well known; and Speusippus, since he denied that pleasure is the good, and since he argued that it is as opposed to the good as pain is (cf. F 80a, F 81a, F 84), is shown to be inconsistent, as he was easily overcome by pleasures.³ It is possible that this notion has its ultimate origin in a misunderstanding of Aristotle, *Eth. Nic.* 1172 A 28-B 3. For in that passage Aristotle, after alluding to Speusippus' doctrine that pleasure is an evil (οἱ δ' ἐξ ἐναντίας κομιδῇ φαῦλον), says: ὁ γὰρ ψέγων τὴν ἡδονήν, ὁφθείς ποτ' ἐφιέμενος, ἀποκλίνειν δοκεῖ πρὸς αὐτὴν ὡς τοιαύτην οὔσαν ἄπασαν· τὸ διορίζειν γὰρ οὐκ ἔστι τῶν πολλῶν. Though this is said against those who think that it is a good practical device to tell the many that pleasure is an evil, even if it is not, for they would thus reach the middle state, Aristotle's statement may have been misinterpreted as referring to Speusippus himself, especially because Speusippus is the only thinker Aristotle explicitly criticizes for subscribing to the doctrine that pleasure is an evil (cf. F 80a and F 81a). With the charge of φιληδονία is connected also T 41 (on Speusippus' death), T 1, lines 9-10: φιλαργυρία (cf. *ad loc.*), and T 1, lines 11-16 (cf. *ad loc.*): Lastheneia, on which cf. also T 39a-b and *Epist. Socr.* XXXVI. Cf. also on T 24a-b, and contrast Diogenes' statement with T 35, on the symposia offered by Plato and by Speusippus.

8-9 φασι . . . ῥίψαι. This story, which has Speusippus in an access of anger throwing his puppy into a well, is not attested elsewhere.

² There is no evidence that Diogenes knew Athenaeus. Moreover, comparison of T 1, 13-16 with T 39a-b shows that neither author can be dependent upon the other for their knowledge of the Dionysian letter.

³ For similar invention of anecdotes in the case of Heraclitus cf. H. Fränkel, *AJP* 59 (1938), pp. 309-313 and my remarks in *Eracrito. Testimonianze e imitazioni* a cura di R. Mondolfo e L. Tarán (Firenze, 1972), pp. 292-296.

It is the kind of story that may have been invented on the basis of the meaning of the philosopher's name. The source of this and of the following anecdote is not known (cf. φασί).

9-10 καὶ ὕφ' ἡδονῆς . . . γάμον. Though Diogenes does not identify the "pleasure" that prompted Speusippus to attend Cassander's wedding, the charge is explained in the only other extant text which deals with this anecdote: T 38 = Philostratus, *Vit. Apoll.* I, 35 Σπεύσιππον τὸν Ἀθηναῖον οὕτω τι ἐρασιχρήματον γενέσθαι φασίν, ὥς ἐπὶ τὸν Κασσάνδρου γάμον ἐς Μακεδονίαν κωμάσαι ποιήματα ψυχρὰ ξυνθέντα, καὶ δημοσίᾳ ταῦθ' ὑπὲρ χρημάτων ἔσαι. Unless Diogenes knew another, no longer extant version of this anecdote, we must infer that by ὕφ' ἡδονῆς he means φιλαργυρία.

The story of Speusippus' attending Cassander's wedding is impossible on chronological grounds, for Cassander married Thesalonike, the daughter of Philip II, in 316, whereas Speusippus died in 339 B.C. or shortly thereafter (cf. p. 7 *supra*). P. Maas, however, in his "ANTIFONAS ΘΥΓΑΤΗΡ," *Riv. Filol.* 55 (1927), pp. 68-70 = *Kleine Schriften* (München, 1973), pp. 104-107 has contended that Cassander was born not in 355 or 350 but ca. 358 B.C., that it is highly improbable that he did not marry before 316 (Thesalonike being his second wife), and that the anecdote narrated by Diogenes and by Philostratus refers to his first wedding. (Maas' conclusions have been accepted by Merlan, *Biographie*, pp. 210-212 = *Kl. Schr.*, pp. 139-141.) But, even apart from basing his chronology of Cassander on an emendation of a scholion on Theocritus,⁴ Maas has not established 358 as the year of Cassander's birth. Nor is there any evidence that he first married at the age of eighteen. And it is highly improbable that Speusippus, an old man who at that time was probably seriously ill (cf. on T 2, lines 11-13 *infra*), would have travelled to attend the wedding of a young man, even though he was Antipater's son. The task of the historian, however, is not at all costs to fit "biographical" notices and anecdotes into a possible but purely conjectural reconstruction. Rather, he must first evaluate them critically. The anecdote in question is highly suspect, precisely because it refers without qualification to "Cas-

⁴ Cf. *Schol. in Theoc. Vet.* 17, 61 (p. 321, 11-12 [Wendel]) ἡ γὰρ Βερενίκη ἐστὶ θυγάτηρ Ἀντιγόνης τῆς Κασσάνδρου τοῦ Ἀντιπάτρου ἀδελφοῦ, where Maas proposes to read ἀδελφῆς for ἀδελφοῦ.

sander's wedding;" and so in all probability it refers to his well-known marriage to Thessalonike in 316 B.C., not to a hypothetical marriage to someone else in 340 B.C. This anecdote may have caused the mistaken chronology in T 8d, according to which Speusippus "became famous" in 316 B.C.

11-16 Ἐλέγοντο . . . λαμβάνεις. The mention of the two female students of Speusippus seems to be merely for the purpose of introducing the letter allegedly by Dionysius II. This letter is also cited by Athenaeus (T 39a-b), from whose citations we may infer that the charge implicit in the words καὶ ἐκ τῆς Ἀρκαδικῆς σου μαθητρίας ἔστι καταμαθεῖν τὴν σοφίαν is that Lastheneia was Speusippus' mistress. The second charge in Diogenes, that Speusippus charged fees, is not mentioned by Athenaeus. (On Speusippus' φιλαργυρία cf. also on lines 9-10 *supra*.) The notion that Speusippus charged fees, coming as it does from the "Dionysian" letter, is suspect. On Plato's refusal to accept fees and on the anecdote that has him reproaching Isocrates for accepting them cf. Riginos, *Platonica*, p. 118.

11-12 Ἐλέγοντο . . . Φλιασία. On Lastheneia of Mantinea and Axiothea of Phlius as students of Plato cf. Diog. Laert. III, 46, who reports that Dicaearchus (= frag. 44 [Wehrli]) said that the two women wore men's clothes (cf. further Wehrli, *Dikaiarchos*², p. 55, on frags. 44 and 45). The source of the notice that Lastheneia and Axiothea were also students of Speusippus being probably the Dionysian letter and the fact that no other students of Speusippus are mentioned here make this notice suspect. On Heraclides as a "student" of Speusippus cf. on T 36 *infra*.

15 δασμολογεῖς. Suidas, s.v. δασμολογῶ (II, p. 7, 31-33), after saying αἰτιατικῇ. συνάγω, cites lines 14-16 (Πλάτων . . . λαμβάνεις) without any mention of source.

16-20 οὗτος . . . ποιοῦσιν. Apart from Plato, Speusippus is the only Academic philosopher in whose life Diogenes has included a catalogue of εὐρήματα (cf. Leo, *Biographie*, p. 56 and n. 1). The first and the third are true "discoveries;" the second, however, is an accusation rather than a discovery and comes from a source hostile to Speusippus. Cf. on lines 18-19 *infra*.

16-18 οὗτος . . . ἀλλήλοις. = F 70. Cf. comm. *ad loc.*

18-19 καὶ πρῶτος . . . Καينهὺς. Fischer, pp. 13-15 cites this passage as evidence of friendly relations between Speusippus and Isocrates. As ἐξήνεγκεν, however, means "brought out," "published," without necessarily implying authorship (cf. Diog. Laert. VIII, 15; Iamblichus, *Vit. Pyth.* 199; Burkert, *Lore and Science*, p. 224), the implication is that Speusippus made known doctrines Isocrates considered to be "secret." Consequently, this passage comes from a source hostile to Speusippus, who is here attacked with the stock charge of divulging secret doctrines (for ἐξενεγκεῖν used in such a context cf. Iamblichus, *Vit. Pyth.* 88).⁵ This being so, the passage is not really about a Speusippean εὖρημα at all (cf. Leo, *Biographie*, pp. 56-57).

Some scholars (e.g. Zeller, II, i, p. 987; Stenzel, col. 1636; Merlan, *Biographie*, p. 202 with n. 4 = *Kl. Schr.*, p. 131) accept this anecdote as historically reliable; they believe that Speusippus had access to some of Isocrates' school-doctrines and that he may even have been a member of Isocrates' school. The tendentious character of this anecdote, however, and the unlikelihood that Isocrates had any kind of secret doctrine at all make it suspect.⁶ Be that as it may, this passage cannot be used as evidence of the existence of an alleged Τέχνη of Isocrates, for the anecdote implies, if anything, that Speusippus was not acquainted with such a work (cf. Wendland, *Anaximenes von Lampsakos*, p. 36 and n. 3).

⁵ The statement in Diogenes Laertius cannot mean merely that Speusippus "habe die nur für den intimen Hörerkreis bestimmten Lehren des Isokrates ins Publikum gebraucht," as Leo, *Biographie*, p. 57 and others interpret, for the passage means that Isocrates considered the doctrines in question to be "secret."

⁶ The fact that Isocrates offered instruction in the art of oratory and that he did not publish his rules does not suffice to label them "secrets." Blass, *Att. Bered.* II², pp. 68-69, 105-106, 111, accepting *Epist. Socr.* XXX (= 28 [Köhler]) as a genuine letter of Speusippus, maintains that Caeneus' statement refers to the letter's citations of τέχναι by Isocrates (cf. *Epist. Socr.* XXX, 4 and 10). Since Blass believes that what was available to "Speusippus" was a Τέχνη put together by Isocrates' students (he rightly denies that Isocrates ever wrote such a work), it is strange that he should have explained Caeneus' statement as he did. For, even apart from the question of the authenticity of the letter, its author alludes to the published works by Isocrates; and, even if he meant by τέχναι a manual of rhetoric, it is still clear that the author of the letter took that work to be a Τέχνη published by Isocrates, so that Caeneus, even if he knew the letter, could hardly have asserted on that basis that Speusippus made known the ἀπόρρητα of Isocrates.

The source cited by Diogenes Laertius, Caeneus, seems to be otherwise unknown.⁷ Jacoby (*FGH* 338 F 18) tentatively proposed to read Idomeneus, and identified him as Idomeneus of Lampsacus, an Epicurean and author of a work on the Socratics. But no evidence supports this conjecture and the mistake has no paleographical likelihood. Gigante, *PP* 24 (1969), pp. 47-49, for his part, suggests Aphareus, on the ground that Isocrates' adoptive son took part in the polemic between the Academy and Isocrates. None of our sources, however, mentions Aphareus in this connection,⁸ and it is noteworthy that Speusippus is charged with being the *first* to divulge the Isocratean "secrets." This is appropriate to a catalogue of εὐρήματα or rather pseudo-εὐρήματα, or to a treatise by a Hellenistic scandalmonger, but not to Aphareus, even if he had attacked Speusippus.⁹ On the latter's attack on Isocrates cf. on line 57 *infra*. The *Socr. Epist.* XXX, even if not genuine, is at least based on a tradition that has Speusippus and Isocrates on hostile terms, cf. my *Pseudo-Speusippean Letters*.

19-20 καὶ πρῶτος . . . ποιῶσιν. We do not know what was Speusippus' device for rendering bundles of firewood portable (by means of a handle? by placing them on a wheel to carry them as if they were a wheel-barrow?). A somewhat similar "discovery" is ascribed to Protagoras in Diog. Laert. IX, 53 on the authority of Aristotle: καὶ πρῶτος τὴν καλουμένην τύλην, ἐφ' ἧς τὰ φορτία βαστάζουσιν, εὗρεν, ὥς φησιν Ἀριστοτέλης ἐν τῷ Περὶ παιδείας (= frag. 63 [Rose]). φοροφόρος γὰρ ἦν, ὥς καὶ Ἐπίκουρός ποῦ φησι (cf. frag. 172 [Usener]). καὶ τοῦτον τὸν τρόπον ἤρθη πρὸς Δημοκρίτου ξύλα δεδεκῶς ὀφθείς. Heinimann, *MH* 18 (1961), pp. 114-115, followed by W. Fiedler, *Analogiemodelle bei Aristoteles* (Amsterdam, 1978), p. 2, n. 2, thinks that the statements about Speusippus and Protagoras go back to their works on τέχνη, i.e. on "art" (cf. on T 1, lines 51 and 53), but this is uncertain.

⁷ The Caeneus referred to by Aristotle in *Anal. Post.* 77 B 41 (οἶον καὶ ὁ Καινὸς ποιεῖ) is said by Leo, *Biographie*, p. 57, n. 1 to be different from our Caeneus. Ross, *Aristotle's Analytics*, p. 548 suggests with good probability that Aristotle's Caeneus is a character in Antiphanes' homonymous play.

⁸ Gigante refers to Thalheim, "Aphareus (4)," *RE* I (1894), col. 2712, 34-57, where, however, nothing is said about Aphareus *vis-à-vis* the Academy.

⁹ Leo, *Biographie*, p. 57 and n. 2 cites our text as evidence that some of the anti-Speusippean statements in the biographical tradition are to be traced back to the Isocrateans. This is true, but does not prove that Caeneus himself was a member of Isocrates' circle.

21-34 Ἡδῆ . . . εὐρήσω. This passage is concerned with Speusippus' last illness and death. To these are attached Diogenes' own epigram and the statement and the anecdote from Timotheus, the anecdote being intended to illustrate once more Speusippus' alleged φιλαργυρία (cf. on lines 32-33 and 33-34 *infra*). The several versions of Speusippus' last illness and of the way he died (cf. on 21-25 *infra*) would by themselves make them all suspect. And the tendentious character of these anecdotes, as well as the proneness of Hellenistic writers to invent scandalous illnesses and deaths for famous men, reinforce our doubts concerning the reliability of these stories in the case of Speusippus.

21-25 Ἡδῆ . . . ὤν. The sequence of the narrative is: (a) Speusippus is paralyzed; (b) he therefore asks Xenocrates to come to Athens and take charge of the school; (c) his miserable condition is illustrated by the anecdote which has Diogenes the Cynic refusing to greet him because he remains alive in such a state; (d) almost as a consequence of this Speusippus at last commits suicide. (a) is at variance with lines 31-32 *infra*; (a) and (b) with T 2, lines 11-27; and (a) and (d) with T 41; (b) is almost certainly to be rejected (cf. on lines 21-22 *infra*); of (c) Stobaeus preserves a different version which reinforces our doubts concerning the reliability of (d) also, cf. on lines 22-25 *infra*.

21-22 Ἡδῆ . . . διαδέξασθαι. According to this passage, when Speusippus felt that death was near, he asked Xenocrates to return to Athens and take charge of the school. The account given in the *Acad. Index Hercul.*, cols. VI, 41-VII, 10 (= T 2, lines 14-27), is different, however. Immediately after the statement that Speusippus was head of the Academy for eight years (on T 2, lines 11-13 cf. the following note), the author states that the members of the Academy voted to elect Xenocrates and that Heraclides and Menedemus were defeated by a few votes. Since the fact that at the time Aristotle was in Macedon is implicitly given in the *Index Hercul.* as the reason why he was not a candidate, the implication is that Xenocrates was in Athens when he was elected. This report must be preferred to the version given by Diogenes Laertius. In the first place, it comes from Philochorus or from another good source (cf. on T 2, lines 11-13 *infra*); and, whereas Diogenes' account is suspect as we shall see, it is highly improbable that the

details about the vote and the results could have been invented. Secondly, Xenocrates seems to have become head of the Academy after the death of Speusippus (cf. on lines 4-5 *supra* and on T 7 *infra*), a fact which is hard to square with Speusippus' having appointed him his successor, but which fits well with the narrative of the *Index Hercul.*

Nor is it possible to harmonize the testimony of Diogenes and that of the *Index Hercul.*, as Stenzel, col. 1638, 12-17 and Merlan, *TAPA* 77 (1946), pp. 103-111 = *Kl. Schr.*, pp. 144-152 believe it is. It may seem plausible to argue that Speusippus asked Xenocrates to return to Athens and take charge of the school, that before he died he recommended Xenocrates to the members of the Academy, that Xenocrates returned to Athens after Speusippus' death, and that he was then chosen by ballot. But the agreement between Diogenes and *Epist. Socr.* XXXII and XXXIII suggests that Diogenes is following a source different from that of the *Index*, for in these letters, too, Xenocrates is absent from Athens, and is urged by "Speusippus" to return, etc. Also Themistius (T 11) says that Speusippus recalled Xenocrates, while pseudo-Galen (T 12) has Speusippus appointing Xenocrates as his successor. The decisive fact is that neither Diogenes nor any other ancient extant source, except the *Index*, refers to the election of Xenocrates by the members of the Academy, and that such sources do not mention, either, the election before the time of Arcesilaus' accession (cf. *Acad. Index Hercul.*, col. XVIII, 1-7 [p. 67, Mekler]). On the other hand, the *Index* does not mention any of the details of the version found in Diogenes Laertius and the other sources cited above. It is clear then that we are dealing with two different sources which are independent of one another. The version found in Diogenes represents the standard Hellenistic "reconstruction" of the *διαδοχαί* which is not based on genuine historical information. In fact, as Leo, *Biographie*, p. 57 says, Diogenes' account seems to be merely a condensation of the narrative of the two pseudo-Speusippean letters, and may be derived from these or similar letters (cf. also Gigon, *MH* 15 [1958], p. 160; and n.b., among others, Diogenes' use in lines 12-16 *supra* of the letter allegedly by Dionysius II, and of the pseudo-Heraclitean letters I and II in IX, 13-14). Even if Diogenes and the letters have a common source, we must conclude that the account in the *Index* either was not known to that source or, if known, was disregarded.

21 Ἦδη . . . διέφθαρτο. That Speusippus was paralyzed before his death may be true, but this notice is not above suspicion. In T 12 Speusippus, being the victim of arthritis (so that he was paralyzed?), appoints Xenocrates his successor as head of the Academy. And paralysis towards the end of his life underlies also the two different versions of Speusippus' exchange with Diogenes the Cynic (cf. the following note). Since in all these passages Speusippus' paralysis is intimately connected with other notices which are suspect (cf. on lines 21-25 and 21-22 *supra*), it is possible that his having been paralyzed may itself be an inference. Such an inference may have been drawn from a text similar to *Acad. Index Hercul.*, VI, 38 (= T 2, lines 11-13), where Speusippus' bodily weakness (τὰ μέλη διαλυθέντα) at the time of becoming head of the Academy seems to be given as the reason why his headship was of eight years only. It is also possible that our Speusippus may have been confused with that referred to by Aristotle (*Rhetoric* 1411 A 21-23), who, citing Polyeuctus (= frag. 3 [Sauppe]), says καὶ τὸ Πολυεύκτου εἰς ἀποπληκτικὸν τινα Σπεύσιππον, τὸ μὴ δύνασθαι ἡσυχίαν ἄγειν ὑπὸ τῆς τύχης ἐν πεντεσυρίγγῳ νόσῳ δεδεμένον (for the interpretation of this saying cf. E. M. Cope-J. E. Sandys, *The Rhetoric of Aristotle*, III [Cambridge, 1877], p. 117). (*Pace* Krämer, *Ursprung*, p. 378, n. 20, the Σπεύσιππος τις Aristotle mentions here cannot be our philosopher.) A different version of Speusippus' last illness is given in lines 31-32 *infra* (phtheiriasis), and Tertullian (T 41) preserves still another (he died while committing adultery). The very shamefulness of these forms of death makes them all suspect and suggests that no authoritative version of Speusippus' death is extant.

22-25 φασί . . . ὦν. This exchange between Speusippus and Diogenes the Cynic, which comes from a source unfavorable to Speusippus, is considered by Diogenes Laertius himself or by his source almost as the cause of Speusippus' alleged suicide. Stobaeus (T 40), however, has preserved a version of this story which is favorable to Speusippus in that he reproaches Diogenes with the statement "οὐ τοῖς σκέλεσιν ζῶμεν, ἀλλὰ τῷ νῷ." As Zeller, II, i, p. 987 saw, T 40 is incompatible with the alleged suicide, for Speusippus' answer to Diogenes' suggestion that he take his own life implies that the life of the intellect is worth living even in Speusippus' unfortunate circumstances. Though it is impossible to say which version of this anecdote is earlier, we can say that both are suspect.

Diogenes the Cynic was one of the favorites of Hellenistic writers for the invention of anecdotes (on his "exchanges" with Plato cf. Riginos, *Platonica*, pp. 111-117 and 147-149); and the two versions of his exchange with Speusippus contradict one another, so that it is impossible to prefer either to the other.

We may also reject the alleged suicide, since it is so intimately connected in Diogenes Laertius with Speusippus' exchange with the Cynic. Hellenistic writers were prone to invent scandalous deaths for famous men (on anecdotes about Plato's death cf. Riginos, *Platonica*, pp. 194-197; on those about Heraclitus cf. n. 3 *supra*), and lines 31-32 and T 41 preserve two other versions of Speusippus' death. On the topical suicide of a philosopher in despondency, cf. the alleged suicides of Aristotle (Diog. Laert. V, 6; *Vita Hesych.* 6-7), Anaxagoras (Diog. Laert. II, 13), Menedemus of Eretria (Diog. Laert. II, 142), etc., and Chroust, *Aristotle*, I (London, 1973), pp. 177-182 and 385-388.

25 ὑπὸ ἀθυμίας. "In despondency." This is taken up by Diogenes in the third line of his epigram on Speusippus.

25-26 γηραιὸς ὢν. Speusippus was probably about seventy years old when he died in 339 B.C. or shortly thereafter. Cf. p. 7 *supra*.

26-30 καὶ ἔστιν . . . μικρόν. In his epigram Diogenes accepts Speusippus' suicide, and elaborates also on the theme of lines 7-8 . . . οὐ μὴν τό γ' ἥθος διέμεινε τοιοῦτος (sc. οἷος ὁ Πλάτων) with the words ὡς ἦν οὐχὶ Πλάτῳ πρὸς αἵματος. On ἀθυμία cf. on line 25 *supra*. The epigram is also preserved in *Anthol. Pal.* VII, 101.

31-32 Πλούταρχος . . . αὐτόν. Here is another version of Speusippus' last illness: phtheiriasis or consumption by lice. Speusippus, however, is not listed in Plutarch's *Life of Sulla* (36, 5-6, 474F-475A [III, 2², p. 186, Ziegler]) among those who died of phtheiriasis. A. Gercke, *De Quib. Laert. Diog. Auctoribus* (Greifswald, 1899), p. 7 would emend Diogenes' text and read οἱ δὲ φασιν φθειρῶν ἐκζέσαι αὐτόν, ὥσπερ Πλούταρχος ἐν τῷ τοῦ ἀνδρὸς βίῳ καὶ Σύλλαν, while Ziegler and Gigante would insert Speusippus' name in the text of Plutarch. But either suggestion is too radical. It is much more likely that Diogenes' statement is due to a lapse of memory, as Casaubon and Menagius believe. These two critics think that Diogenes,

knowing the passage in Plutarch, mistakenly thought that Speusippus was included in it. The suggestion of Leo, *Biographie*, p. 58 is perhaps more likely, however. He maintains that Diogenes (or his source) found the notice about Speusippus in a writer who listed famous men who died of phtheiriasis. This author (he may also have been Plutarch's source) is probably Myronianus, who seems to have ascribed Plato's death to the same illness (cf. Diog. Laert. III, 40; Riginos, *Platonica*, p. 196). Myronianus is cited twice in the life of Xenocrates (IV, 8 and 14) and seems to have been one of the authorities from whom Diogenes borrowed directly (cf. Wilamowitz, *Philol. Unters.*, III, pp. 160-161). The very title of Myronianus' work, 'Ἱστορικῶν ὁμοίων κεφάλαια (cf. Menagius' note on Diog. Laert. I, 115) suggests that he dealt with comparative materials. In short, Diogenes, knowing both Myronianus and Plutarch and citing from memory, confused the former with the latter as the source for Speusippus' phtheiriasis. If this is so, this version of Speusippus' death must have been current in the biographical tradition and is not due merely to a mistake on the part of Diogenes.

ἐκζέσαι. Cf. Suidas, s.v. ἐκζέσεις (II, p. 218, 3): ἐκβραμός. φασὶ δὲ αὐτὸν φθειρσὶν ἐκζέσαι. Cf. also Suidas, s.v. λείβει (III, p. 257, 14-15).

32-33 ἦν . . . Περὶ βίων. What is the meaning of διακεχυμένος here? Menagius and Leo, *Biographie*, p. 58 and others interpret it metaphorically, "disolute," "dissipated," and cite Diog. Laert. IV, 16, where Polemon as a youth is said to have been ἀκόλαστός τε καὶ διακεχυμένος. But nothing in our passage justifies this meaning. Diogenes' purpose in reporting Timotheus' statement about Speusippus seems to be to support his previous contention that Speusippus died of phtheiriasis. And so, *pace* Mensching, *Hermes* 92 (1964), p. 383 and n. 2, the sentence probably means, "and in fact his body wasted away." (This is how Hicks interprets it.) For διαχέω used of a corpse, cf. Herodotus III, 16, 2 ὁ γὰρ δὴ νεκρὸς ἄτε τεταριχευμένος ἀντειχέ τε καὶ οὐδὲν διεχέετο, with Stein's note *ad loc.*

Τιμόθεος . . . βίων. Cf. *FHG* IV, p. 523. The following anecdote also comes from Timotheus, though Müller has failed to include it among the fragments of this historian. On the character of Timotheus' work cf. also Diog. Laert. III, 5; V, 1; VII, 1, and, with reservations, Mensching, *Hermes* 92 (1964), pp. 382-384.

33-34 οὗτος . . . εὕρήσω. Diogenes, having cited Timotheus *à propos* of Speusippus' death, adds from the same source an anecdote unfavorable to the philosopher. The point of the story is not only to make of Speusippus a procurer (so Leo, *Biographie*, p. 58) but also to call attention to his alleged φιλαργυρία (cf. on lines 9-10 and 11-16 *supra*) and perhaps also to his inability to understand love. (On other sayings attributed to Speusippus cf. on lines 22-25 *supra*.) There is no need to emend εὐμορφότεραν either to ἀμορφότερον (Richards, *CR* 18 [1904], p. 345) or to εὐμορφότερον. The reading of the MSS means "a more handsome bride" (Hicks).

35-65 Καταλέλοιπε . . . ὑπομνημάτων. Diogenes' catalogue of Speusippus' writings is a most unsatisfactory document, and most scholars would agree with Bywater's description of it: "it is defective; it is confused through want of proper classification of the writings enumerated; and there are cases in which it is clear that one and the same work figures twice over in it." He therefore agrees with Wilamowitz (*Antigonos*, p. 330, n. 16) that the list is "contaminated" and conjectures that it was compiled from two different catalogues (cf. Bywater, pp. 27-28; he is followed by Merlan, *Biographie*, p. 200 and n. 3 = *Kl. Schr.*, p. 129).¹⁰

Lang, pp. 42-47 and 48-49, for his part, believes that the disorder in the list is due to a defect in the transmission of the text of Diogenes Laertius. He proposes to detach *διάλογοι* from the ten books of the *Ὅμοια* in line 54 (cf. *ad loc.*) and to transpose lines 60-63 after *Κλεινόμαχος ἢ* in line 46 on the grounds that the double title *Κλεινόμαχος ἢ Λυσίας α'* is unlikely for a dialogue, that the *Epistles* should be the last work in the list before the *Definitions*, and that the *Lysias* occurs both in lines 46 and 63. According to Lang lines 60-63 were originally written in the margin, the title *Λυσίας* being repeated there in order to indicate the place of the insertion. But this was misunderstood by a scribe, who wrongly transcribed the titles after line 59. This hypothesis, however, and several other of Lang's views concerning the nature of the catalogue

¹⁰ There is no likelihood, however, in Merlan's contention that *ὑπομνηματικοὶ διάλογοι* (T 1, line 52) is not a title, but a confusion of two parts of one catalogue (*ὑπομνήματα* and *διάλογοι*) and that the other catalogue also had two parts: *διάλογοι* (T 1, line 54) and *τάξεις ὑπομνημάτων* (T 1, line 65). What is said against Lang's interpretation in the text (cf. also on T 1, lines 52, 54, and 65) suffices also to reject Merlan's interpretation.

are highly improbable for the following reasons: (a) Even apart from the fact that the title Κλεινόμαχος ἢ Λυσίας α' (as well as other titles in the list) may not go back to Speusippus himself (cf. this note *infra*), it is certainly not impossible for a dialogue to have as alternative titles two proper names (cf. on line 46 *infra*). (b) The *Lysias* of line 63 may or may not be the same work as that of line 46. Even if it is, however, the work of line 46 is said to have been in one book, whereas there is no such indication in line 63. Yet, if the scribe who allegedly wrote the marginal note did repeat the word *Lysias* in order to indicate insertion before Λυσίας α', one would have expected him to repeat the book indication also. Moreover, to indicate insertion in a case of several words which have been omitted, scribes usually use a symbol and repeat no word or, if they do repeat a word, they usually repeat the word immediately preceding the omission, not that which comes after the words to be inserted.¹¹ The more so in this case, where the first words in the insertion would be an alternative title (i.e. Κλεινόμαχος ἢ περὶ νομοθεσίας). (c) If Lang is right in contending that the *Epistles* and the *Definitions* were the last items in the catalogue proper,¹² then it is hard to see why the titles in lines 60-63 were inserted between the *Epistles* and the *Definitions* rather than at the end of the list after the *Definitions* or after τάξεις ὑπομνημάτων. (d) Lang's contention that—with the exception of the work "On Pythagorean Numbers"—all the titles ascribed to Speusippus by ancient writers appear in the list, cannot be accepted. For, not to mention some

¹¹ In support of his interpretation Lang refers to the important paper by A. Brinkmann "Ein Schreibgebrauch und seine Bedeutung für die Textkritik," *Rh. Mus.* N.F. 57 (1902), pp. 481-497. But the examples cited there are not at all parallel to Lang's suggestion concerning T 1, lines 60-63.

¹² As to this last point, Lang's reference to Thrasyllus' catalogue of Plato's works is surely not to the point. Thrasyllus' is a classification of Plato's works originally made probably in connection with "Introductions" to the study of Plato (cf. Tarán, *Academica*, pp. 5-7), whereas the list of Speusippus' writings ultimately comes from one or more catalogues in Hellenistic libraries (cf. the text *infra*). The catalogue of Speusippus' writings should be compared with the lists of works of Peripatetic philosophers. Lang, however, dismisses the parallels of Theophrastus (on whose catalogue cf. Regenbogen, *RE*, *Supplb.* VII [1940], cols. 1363, 54-1370, 9) and of Demetrius of Phaleron (Diog. Laert. V, 81) as "special cases." Yet the notion that in the catalogues of philosophers, as in those of the orators, letters were the last items (cf. e.g. Lang, 43-44; Regenbogen, s.v. Πλάτ., *RE* XX [1950], cols. 1431, 66 ff.) is perhaps too readily accepted in view of the scarcity and unreliability of the evidence.

controversial items (cf. e.g. on F 1 and on F 3 *infra*), Diogenes mentions neither the Πρὸς Κλεοφῶντα (cf. on F 4) nor Speusippus' report on Plato's lecture "On the Good" (cf. on T 45 *infra*). (e) Hence, Lang's belief that the catalogue exhibits a classification of Speusippus' writings can hardly be right. In fact, there is no reason to think that even all the works mentioned in lines 37-53 were dialogues. To be sure, there is something wrong in line 54 (cf. *ad loc.*); but Lang's assertion that δῖαλογοι there refers to *all* the preceding titles is not necessarily supported by the parallel he alleges.¹³ And it is in any case improbable that, among others, works such as Περὶ ψυχῆς α', Πρὸς Γρύλλον α', and Τεχνῶν ἑλεγχος α' were dialogues. Moreover, the fact that the Περὶ ψυχῆς α' in line 48 is separated by several items from the first six Περὶ-titles in the list, is inconsistent with Lang's view that the Περὶ-titles which were dialogues were all grouped together. (f) Diogenes says that Speusippus left behind many prose-treatises (πάμπλειστα ὑπομνήματα [cf. on line 65 *infra*]) and numerous dialogues (διαλόγους πλείονας; for πλείονας here = "complures," cf. D. Wytttenbach, *Opuscula*, II [Leiden and Amsterdam, 1821], p. 22). Excluding the *Epistles* and the *Definitions*, however, Lang ascribes only five titles to Speusippus' prose-treatises. In order to save his interpretation, he suggests that Τάξεις ὑπομνημάτων in line 65 is a collective reference to several treatises which fall outside the classification he sees embodied in the list. This interpretation of line 65 can hardly be right, however (cf. note *ad loc.*). But, in any case, even if Diogenes is giving a selective list of Speusippus' writings, it is unlikely, in view of the words he uses in introducing the list, that he should have mentioned so few treatises.

Bywater's hypothesis is more attractive than Lang's, but does not suffice to explain the evidence. For we find probably repeated titles not only within the first and the second parts of the list (e.g. the *Lysias* in lines 46 and 63), but also in the first part of the catalogue, as in lines 44-45, where the Πρὸς Κέφαλον α' and the

¹³ Lang cites Diog. Laert. VII, 166, where at the end of the catalogue of Herillus' writings we find Διάλογοι. Θέσεων ἡθικῶν. Editors conjecture that one or more numerals are missing after ἡθικῶν; but it is just as probable that what was meant was Διάλογοι θέσεων ἡθικῶν. Nor can it be excluded that δῖαλογοι is out of place, as it may be also in T 1, line 54 (cf. note *ad loc.*). In all other cases in Diogenes Laertius the word δῖαλογοι precedes the titles to which it refers.

Κέφαλος α' probably are one and the same work (cf. note *ad loc.* and, against Lang, on F 4 *infra*). Moreover, Bywater's hypothesis contributes little or nothing to the elucidation of the other problems in Diogenes' list. These defects are not peculiar to the catalogue of Speusippus' writings, but appear also in other catalogues preserved by Diogenes Laertius, e.g. those of Xenocrates', Aristotle's, and Theophrastus' works.

The list of Speusippus' writings is in all probability incomplete. This can be inferred from the several titles ascribed to him elsewhere (cf. on T 45, T 46, T 47, F 1, F 3, F 4, and F 28 *infra*), which cannot all be identical with some of those listed in T 1, lines 37-65. (But it is only by a misunderstanding of line 36 [cf. *ad loc.*] that Burkert, *Lore and Science*, p. 69, n. 106 can say that the list is specifically said to be incomplete.) It is therefore safe to say that some of the defects of the catalogue of Speusippus' writings must go back to Diogenes himself and/or to his source. It is not at all likely, as we have seen, that the list as we have it, or even with Lang's rearrangement of the text, exhibits a systematic classification of Speusippus' works. The catalogue seems to have originated in one of the Hellenistic libraries, as is shown by the indication of the number of *στίχοι* at the end of the list. These titles, or at least some of them, may not even go back to Speusippus himself,¹⁴ and so there is no reason to think, as some scholars do, that the "original" title of a work is more likely to be that included in the catalogue than the title by which a later author cites it (cf. on F 1 for the possibility that Πλάτωνος ἐγκώμιον and Πλάτωνος περιδειπνον may be one and the same work). Since in most cases we know nothing at all about the individual works listed in the catalogue, I have tried to find parallels to these titles in the lists of the works of Xenocrates, Aristotle, and Theophrastus. Not to complicate matters unnecessarily in the case of Aristotle, I have cited only from the catalogue preserved by Diogenes Laertius. (On the question of the several lists of Aristotle's writings, cf. Moraux, *Les listes, passim.*)

36 ἐν . . . Κυρηναίων. Since the "Aristippus" was in one book (cf. line 50 *infra*), E. Mannebach, *Aristippi et Cyren. Frag.* (Leiden-Köln, 1961), p. 84 proposes to take this passage together with line 37 (making the complete title of the work Ἀριστιππος ὁ Κυρηναῖος περὶ

¹⁴ On the question of "titles" of ancient works cf. E. Nachmanson, *Der griechische Buchtitel, GHA* 47 (1941), Nr. 19.

πλούτου α') and contends that the butt of Speusippus' anti-hedonistic argument was Eudoxus, not Aristippus. Hirzel, *Der Dialog*, I, p. 313, n. 4 had already proposed to read ἐν οἷς καὶ <πρὸς> Ἀρίστιππον τὸν Κυρηναῖον περὶ πλούτου. Both proposals, however, are highly improbable, since the title in line 36 is in the accusative and, hence, "outside" the catalogue proper, whereas the title in line 37, like the Περὶ-titles in the following lines, belongs to it. Consequently, the words ἐν οἷς καὶ Ἀρίστιππον τὸν Κυρηναῖον are a parenthetical remark which must be ascribed to Diogenes himself or to his source (cf. Bywater, p. 27, n. 1) and should neither be excised nor emended. Nor should one excise Ἀρίστιππος α' in line 50, as Menagius and Long do, since it obviously belongs to the πίναξ. (The way in which Long and other editors print and punctuate line 36 is clearly wrong.) On the possibility that Speusippus may have attacked Aristippus' conception of pleasure as the supreme good cf. Ch. IV with notes 382-384 there and comm. on F 80-81 with note 264.

37-39 Περὶ . . . δικαιοσύνης α'. Three ethical works, which may or may not have been dialogues. **Περὶ πλούτου α'.** Works with this title are also ascribed to Xenocrates (Diog. Laert. IV, 11 [I, p. 169, 15]), Aristotle (Diog. Laert. V, 22 [I, p. 206, 3]), and Theophrastus (Diog. Laert. V, 47 [I, p. 222, 22]). **Περὶ ἡδονῆς α'.** Cf. Philip of Opus, Test. 1 (Tarán) and *Academica*, p. 134 and n. 564. Xenocrates wrote a Περὶ ἡδονῆς in two books (Diog. Laert. IV, 12 [I, p. 170, 20]); Aristotle one in one book (Diog. Laert. V, 22 and 24 [I, p. 206, 8 and 207, 29]); and so did also Theophrastus (Diog. Laert. V, 44 [I, p. 219, 4]; cf. also p. 219, 3: Περὶ ἡδονῆς ὡς Ἀριστοτέλης α'); Strato's work (Diog. Laert. V, 59 [I, p. 229, 8]) is given without indication of the number of books. On Speusippus' doctrine of pleasure and on his attack against Eudoxus cf. on F 80-81 *infra*. On Academic doctrines about "pleasure" cf. pp. 79 ff. *supra*. **Περὶ δικαιοσύνης α'.** A title attested also for Xenocrates (Diog. Laert. IV, 12 [I, p. 170, 17]; cf. also IV, 13 [I, p. 171, 3]: Ἀρχέδημος ἢ περὶ δικαιοσύνης α'), Aristotle (Diog. Laert. V, 22 [I, p. 205, 19]: in four books), Heraclides Ponticus (Diog. Laert. V, 86 [I, p. 242, 14]: in three books), and Strato (Diog. Laert. V, 59 [I, p. 228, 15]: in three books [?]).

40 Περὶ φιλοσοφίας α'. Dialogues with this title (but with no indication of the number of books) are ascribed to the Socratics

Simon (Diog. Laert. II, 122 [I, p. 110, 1]) and Simmias (Diog. Laert. II, 124 [I, p. 111, 17]). A *Περὶ φιλοσοφίας* in one book is attested for Xenocrates (Diog. Laert. IV, 13 [I, p. 171, 1]), and it is well known that Aristotle's homonymous work was in three books (Diog. Laert. V, 22 [I, p. 205, 21] and frag. 26 [Rose]). There is no evidence to support the modern notion that either of these two works was a dialogue, and the same may be said about Speusippus' book (cf. Tarán, *AJP* 87 [1966], pp. 466-467 on Aristotle's work). There is no reason to emend the title of line 40 to *Περὶ φιλοσόφων*, as Menagius and (tentatively) Long propose (cf. also on F 3 *infra*). And it is hardly likely that Speusippus' *Περὶ φιλοσοφίας* is identical with his report on Plato's lecture "On the Good" (cf. on T 45 *infra*).

41 *Περὶ φιλίας α'*. A work "On friendship" in one book is also attested for Aristotle (Diog. Laert. V, 22 [I, p. 206, 16]); on this subject cf. also books VIII and IX of the *Nicom. Ethics*). Xenocrates' homonymous work was in two books (Diog. Laert. IV, 12 [I, p. 169, 24]) and that by Theophrastus was in three books (Diog. Laert. V, 45 [I, p. 220, 24]). Philip of Opus wrote a *Περὶ φίλων καὶ φιλίας* in one book (cf. Test. 1 [Tarán] with *Academica*, p. 134). Plato's *Lysis* at some point acquired the alternative title *Περὶ φιλίας*, and its notorious influence on Aristotle suggests that the topic of friendship was a subject for debate in the Academy.

42 *Περὶ θεῶν α'*. The homonymous works by Philip of Opus (Test. 1 [Tarán]) and by Xenocrates (Diog. Laert. IV, 13 [I, p. 170, 26]; cf. Xenocrates, frag. 17 [Heinze]) were in two books. For the little that survives of Speusippus' "theology" cf. on F 56-58 *infra* with pp. 47-48 *supra*.

43 *Φιλόσοφος α'*. Cf. on F 3 *infra*.

44-45 *Πρὸς . . . Κέφαλος α'*. Whether *Πρὸς Κέφαλον* means "To Cephalus" or "Against Cephalus," it is more likely than not that the two titles refer to one and the same work, the repetition being due to dittography. We should not emend the former to *Πρὸς Κλεοφῶντα*, as Lang proposes (cf. on F 4 *infra*). This Cephalus may well have been Lysias' father, as it seems that like Plato Speusippus was interested in the family of the orator (cf. on lines 46 and 57 *infra*).

46 Κλεινόμαχος ἢ Λυσίας α'. (Against Lang's proposal to rearrange the text cf. on T 1, 35-65 *supra*.) This work may or may not be identical with the *Λυσίας* of line 63. Lysias is probably the orator. Since the work was probably a dialogue, we may infer that Cleinomachus was the main, or one of the main characters in it. He may well have been the eristic philosopher contemporary of Euclid of Megara and Menedemus of Eretria (on this Cleinomachus cf. Gerth, *RE* XI [1921], cols. 617, 64-618, 2). Against Lang's contention that a dialogue cannot have as alternative titles two proper names cf. Stilpo's Ἀρίστιππος ἢ Καλλίας (Diog. Laert. II, 120 [I, p. 107, 25-26]), a parallel that Lang (p. 44 and n. 2) too readily dismisses.

47 Πολίτης α'. A work of "political" or "ethical" contents. I have been unable to find a parallel to this title.

48 Περὶ ψυχῆς α'. Works with this same title are ascribed to Xenocrates (Diog. Laert. IV, 13 [I, p. 170, 27]: in two books), to Aristotle (Diog. Laert. V, 22 [I, p. 206, 5]: in one book; V, 24 [I, p. 208, 6]: *Θέσεις περὶ ψυχῆς α'*; and of course the extant *De Anima* in three books). A *Περὶ ψυχῆς θέσεις μία* is ascribed to Theophrastus (Diog. Laert. V, 46 [I, p. 221, 6]), a *Περὶ ψυχῆς καὶ κατ' ἰδίαν περὶ ψυχῆς* to Heraclides Ponticus (Diog. Laert. V, 87 [I, p. 243, 3]). Though Plato's *Phaedo* was later referred to also as *Περὶ ψυχῆς* (cf. Callimachus, *Epigr.* 23, 4 [Pfeiffer], etc.), the preceding parallels (with the possible exception of Heraclides' work) themselves suggest that Speusippus' work was not a dialogue. Zeller, II, i, p. 1007, n. 2 thinks this work of Speusippus was of a metaphysical character, as it dealt especially with the cosmic soul; but there is no evidence to support this last contention. On what remains of Speusippus' doctrine of the soul cf. F 54-57 *infra*.

49 Πρὸς Γρύλλον α'. Gryllus, Xenophon's son, died in the battle of Mantinea (362 B.C.). According to Aristotle (frag. 68 [Rose] = Diog. Laert. II, 55) many *encomia* were written in his honor. Aristotle himself wrote one (*Περὶ ῥητορικῆς ἢ Γρύλος α'*, cf. Diog. Laert. V, 22 [I, p. 205, 23], and frags. 68-69 [Rose]), in which he is supposed by some scholars (e.g. Moraux, *Les listes*, pp. 31-32 and 323-324) to have attacked Isocrates' *Gryllus* (cf. Hermippus, frag. 52 [Wehrli] = *FHG* III, p. 46, Nr. 45 = Diog. Laert. II, 55). Fischer, 36-37, Gigon, *MH* 15 (1958), p. 169, n. 42, and others believe that

Speusippus in his *Πρὸς Γρύλλον α'* attacked Aristotle, while Merlan (*Biographie*, p. 204 and n. 5 = *Kl. Schr.*, p. 133) thinks that if Speusippus attacked anyone it was Isocrates, not Aristotle. There is no evidence to support either view, and it is just as possible that Speusippus' work contained no attack at all. The *terminus post quem* is 362 B.C.

50 *Ἀριστιππος α'*. Cf. on T 1, line 36 *supra*.

51 *Τεχνῶν ἔλεγχος α'*. Heinimann, *MH* 18 (1961), p. 114 and n. 39 thinks that this title refers to a work on τέχνη = "art." Since the meaning of αἱ τέχναι = "rhetorical treatises" is attested for Speusippus' time (cf. Isocrates, *Adv. Soph.* 19 . . . τὰς καλουμένας τέχνας with scholion *ad loc.*), however, *Τεχνῶν ἔλεγχος* here probably means "Refutation (or Examination?) of rhetorical works." Wendland's notion (*Anaximenes von Lampsakos*, p. 35, n. 2) that chs. 4, 9, and 10 of *Epist. Socr.* XXX are indebted to this work of Speusippus is in itself unlikely, since the epistle seems to refer to Isocrates' *Philippus* (cf. also on T 1, lines 18-19 *supra* [against Blass] and Lang, p. 39, n. 1).

52 *Ὑπομνηματικοὶ διάλογοι*. "*Sive hi fuerunt dialogi quasi lineis tantum adumbrati sive usque eo perducti, ut scaena tantum deesset personis*" (Lang, p. 46); "Memoirs in the form of dialogue" (LSJ, s.v. ὑπομνηματικός). But the title may mean merely "Mnemonic dialogues," i.e. dialogues to help memorize. (Against Merlan cf. note 10 *supra*.)

53 *Τεχνικὸν α'*. Stenzel, col. 1648, 53-56 seems to think that this was a treatise of logic related to Speusippus' conception of diaeresis, while Heinimann, *MH* 18 (1961), p. 114 and n. 39 believes that it was a τέχνη, i.e. a treatise on "art." Since τεχνικός, however, was frequently applied to rhetoricians (cf. Plato, *Phaedrus* 273 A 2-3 and E 3, *Gorgias* 504 D 5-6 with Dodds' note on 504 D 5), it is perhaps more likely that this title belongs to a rhetorical treatise (cf. also on line 51 *supra*). (On Speusippus' probable use of τεχνικός in a different context cf. F 28, line 12 with note *ad loc.*) Pace Merlan (cf. on lines 35-65 *supra*) there is no reason to think that this treatise is the same as that of line 51.

54 † Διάλογοι †. Since it is hardly likely that the classificatory work "On Similar Things" could have been a dialogue, it is best to detach *διάλογοι* from the title that follows it (cf. Krische, *Forschungen*, p. 253, n. 2; Zeller, II, i, p. 997, n. 1; Lang, pp. 16-17; Stenzel, col. 1648, 20 ff.). Zeller's alternative proposal to read *διαλογαί* (= "enumerations") is unlikely in view of the need to emend *τῶν . . . ὁμοίων* to *τῆς . . . πραγματείας* (cf. the following note). It is highly improbable that *διάλογοι* refers to all the works that precede it in the list (cf. on T 1, lines 35-65 *supra*). The word may be out of place or may be the result either of a conjecture prompted by inability to understand the MSS' *τῶν . . . ὁμοίων* or of dittography (cf. line 52).

Τῆς . . . ι'. This is Brinkmann's emendation (cf. Lang, p. 17). It must be accepted in view of the MSS' impossible *τῶν περὶ τὴν πραγματείαν ὁμοίων*. Cf. Xenocrates' *τῆς περὶ τὸ διαλέγεσθαι πραγματείας βιβλία ιδ'*, κτλ. (Diog. Laert. IV, 13 [I, p. 171, 14]) and other examples quoted by Lang. For what remains of this work cf. F 6-27. All these fragments seem to come from the second book.

55 Διαιρήσεις . . . ὑποθέσεις. On this work and on its relation to the preceding one cf. p. 66 *supra*.

56 Περί . . . παραδειγμάτων. Cf. p. 66 *supra*.

57 Πρὸς τὸν Ἀμάρτυρον. Hicks is almost certainly wrong in rendering this as "A Reply to the Anonymous Work," for Speusippus' treatise was in all probability directed against Isocrates' *Πρὸς Εὐθύνοῦν ἀμάρτυρος* (*Or.* XXI), which was also known as *Ἀμάρτυρος*, just as Antisthenes' *Πρὸς τὸν Ἰσοκράτους Ἀμάρτυρον* (Diog. Laert. VI, 15 [II, p. 253, 5]) was so directed. On this and on the relation to the famous process between Euthynus and Nicias, and on Lysias' speech *Πρὸς Νικίαν περὶ παρακαταθήκης* (frag. 98 [Thalheim]), probably identical with his *Ὑπὲρ Εὐθύνου* (frag. 50 [Thalheim]), cf. C. Reinhardt, *De Isocratis Aemulis* (Bonnae, 1875), p. 43; Usener, *Kl. Schr.* III, p. 66; Lang, p. 38; Merlan, *Biographie*, p. 202 = *Kl. Schr.*, p. 131. Merlan's attempt to date this work of Speusippus is not convincing.

58 Πλάτωνος ἐγκώμιον. Cf. F 1-2 with comm. *ad locc.*

59 Ἐπιστολαὶ . . . Φίλιππον. On the letters and their probable spuriousness cf. my *Pseudo-Speusippean Letters*.

60 Περὶ νομοθεσίας. Cf. on F 4 *infra*.

61 Μαθηματικός. Cf. on F 28, lines 4-5 *infra*.

62 Μανδρόβολος. Cf. on F 5a-b *infra*.

63 Λυσίας. Cf. on T 1, lines 35-65 and 46 *supra*.

64 Ὅροι. The author of the *Anonymous Prolegomena to Platonic Philosophy* 26, 4 (Westerink) reports that some critics ascribed the pseudo-Platonic *Definitions* to Speusippus; so did also Ficino (cf. Lang, p. 23, n. 1) and even a modern scholar (C. Del Grande, *Hybris* [Napoli, 1947], pp. 409-410). This ascription is impossible, however, in view of the abundance of Peripatetic and Stoic material in the extant *Definitions*. Nor is there any reason to think that Speusippus is ultimately responsible for putting together the Academic material of that collection (cf. Lang, pp. 22-23; Ingenkamp, *Unters. zu den pseudoplaton. Definitionen*, pp. 112-113).

The parallels between the *Definitions* and the extant fragments of Speusippus are few (cf. *infra*). If Speusippus truly wrote such a work, we do not know whether its "definitions" were of a similar nature to those in the pseudo-Platonic work. But Stenzel's notion (col. 1650, 25-33) that F 63a precludes the formulation by Speusippus of definitions such as those found in the extant *Definitions*, is surely too extreme; cf. Ingenkamp, *op. cit.*, who rightly refers to F 60 and F 77. On the import of definition in Speusippus cf. pp. 63 and 68-70 *supra* and on F 63-69 *infra*.

65 Τάξεις ὑπομνημάτων. Hicks (similarly Gigante) translates this as "Arrangements of Commentaries" and takes it to be a title. But whether these words go back to Speusippus himself or not, ὑπομνήματα here can hardly mean "commentaries," since this meaning is Hellenistic at the earliest. It is therefore unlikely that even a later author would have called "commentaries" one or more works by Speusippus. If ὑπομνήματα itself goes back to Speusippus,¹⁵ its

¹⁵ Cf. Xenocrates' ὑπομνημάτων α' (Diog. Laert. IV, 13 [I, p. 171, 22]); Aristotle's ὑπομνήματα ἐπιχειρηματικά γ' (Diog. Laert. V, 23 [I, p. 206, 25]); Theophrastus' ὑπομνήματα α' (Diog. Laert. V, 49 [I, p. 224, 9]).

meaning would probably be "Memoirs;" if the word goes back to a Hellenistic or later author, the meaning "Treatises" or "Writings" is also possible.¹⁶ In either case, however, it is hard to see how τάξεις ὑπομνημάτων can be a title. If it is not, the words in question probably do not go back to Speusippus himself. In this context the expression should rather mean "Arrangements of Memoirs by Speusippus," or "Arrangements or lists of writings by Speusippus." Lang, pp. 47 and 49 seems to have taken it in the latter sense. But unfortunately he thought that the expression should be interpreted in the light of Diog. Laert. IX, 49 (II, p. 463, 6-8: τάττουσι δέ τινες κατ' ἰδίαν ἐκ τῶν ὑπομνημάτων [sc. of Democritus] καὶ ταῦτα· Περὶ τῶν ἐν Βαβυλῶνι ἱερῶν γραμμάτων, κτλ.); and so he took τάξεις ὑπομνημάτων to be a reference to several works of Speusippus which fall outside the classification he sees embodied in T 1, 37-64. This part of Lang's interpretation cannot be right, since Diog. Laert. IX, 49 comes after Diogenes' report of Thrasyllus' classification of Democritus' writings, whereas Diogenes does not classify Speusippus' writings, and no such classification can be reconstructed from the order in which he cites the titles (cf. on T 1, lines 35-65 *supra*). Since τάξεις, however, can also mean "assessment" (sc. of tribute), "ration" (sc. of water), cf. LSJ, s.v. II, 4, it would also be possible to take τάξεις ὑπομνημάτων together with the number of στίχοι that follows. And so the whole expression could mean "(The) sum of treatises (is) 224.075 lines." The fact that τάξεις is in the plural is not fatal to this interpretation, just as it is not fatal to either of the two possible interpretations mentioned above.

66 Μκβ' ,δσε'. = 224.075. This is Ritschl's interpretation of the numerals in the MSS (cf. *Opuscula Philologica*, I [Lipsiae, 1866], pp. 191 and 830). Lang, p. 47 arrives at the same figure through a slightly different reading. (Most texts previous to Long's edition of Diogenes Laertius read 43.475.) The difficulty Lang finds, that 224.075 lines is too high a number, has to do with his notion that, except for the omission of the treatise "On Pythagorean Numbers" and for a few works collectively referred to in lines 52 and 65 (cf. *contra* on T 1, 35-65, T 1, 54, and T 1, 65) the list is complete. But

¹⁶ In T 1, 35 ὑπομνήματα means "treatises" in contrast with "dialogues." But the meaning "writings" is common both in Diogenes and in other late authors, cf. Stephanus, s.v. ὑπόμνημα, LSJ, s.v. 5a. On ὑπομνήματα cf. F. Bömer, *Hermes* 81 (1953), pp. 215-226, esp. 221-222.

in view of his statement that Speusippus left very many treatises and numerous dialogues, the works Diogenes lists must be a selection of those he or his source found in the original catalogue.

66-67 πρὸς . . . Βίωνος. Cf. *FGH* 561 T 3a-b. The reading of the MSS (σιμωνίδης) must be emended to Τιμωνίδης, as Westermann and Fischer, p. 16 with notes 38 and 40, already saw. Cf. Plutarch, *Dion*, 35, 4 (974 A) = T 31: Τιμωνίδης δέ, πραττομέναις ἐξ ἀρχῆς ταῖς πράξεσι ταύταις μετὰ Δίωνος παραγενόμενος καὶ γράφων πρὸς Σπεύσιππον τὸν φιλόσοφον, ἱστορεῖ κτλ., and Plutarch probably was Diogenes' source for this notice. On Timonides and his relation to Dion and Speusippus cf. on T 29-31 *infra*.

The words τε καὶ Βίωνος should probably be deleted (so, among others Müller *ad loc.* and Schwartz, *RE* V [1903], col. 742), since nothing is known of such a man in connection with Dion's expedition against Syracuse. We have here a case of dittography.

67-69 φησὶ . . . ὠνήσατο. = *FHG* III, p. 579, Nr. 10 = Favorinus, F 9 (Mensching) = frag. 39 (Barigazzi). This text must be discussed in conjunction with T 42 = Aulus Gellius III, 17, 3: *Aristotelem quoque traditum libros pauculos Speusippi philosophi post mortem eius emisse talentis Atticus tribus*. Mensching, *Favorin*, pp. 56-57 and 75-77 contends that this passage of Gellius does not derive from Favorinus, as Diogenes' does, that the former does imply that Aristotle plagiarized Speusippus, but that the statement in Diogenes means merely that Aristotle bought Speusippus' library. Barigazzi, *Favorino*, pp. 200-201, though he believes that also the source of Gellius is Favorinus, nevertheless interprets the evidence in essentially the same way as Mensching. The passage of Gellius is preceded and followed by stories definitely implying that Plato plagiarized Pythagorean writings. This and the extraordinarily high price Aristotle allegedly paid imply that Gellius meant to suggest that Aristotle plagiarized Speusippus, and that same purpose must be ascribed to his source. The fact that the price mentioned by Gellius and by Diogenes is the same suggests that the former's source was also Favorinus. Even if he was not, it seems to me to be more probable than not that Favorinus too must have meant that Aristotle plagiarized Speusippus (cf. also Gigon, *MH* 15 [1958], p. 161, n. 23). For, though the words used by Diogenes (αὐτοῦ [sc. Σπευσίππου] τὰ βιβλία) are ambiguous, we must note that they

come immediately after the list of Speusippus' writings. The probability is that they refer to Speusippus' works, not to his library, which has not been mentioned at all. Moreover, if Favorinus is not Gellius' source, then the probability is that the source common to both did tell the story in the sense of plagiarism on the part of Aristotle. That Gellius speaks of "*libros pauculos Speusippi philosophi*" but Diogenes of τὰ βιβλία (sc. αὐτοῦ) is not, *pace* Mensching, a decisive objection against either of the two possibilities mentioned above, because there is no need to suppose that both Gellius and Diogenes are merely copying their source or sources. It is possible that Gellius reproduces Favorinus' or somebody else's wording, whereas Diogenes, influenced by the fact that he has just given the list of Speusippus' writings, may have written τὰ βιβλία; or, conversely, Diogenes may have found τὰ βιβλία in Favorinus, whereas Gellius, influenced by the two stories he tells about Plato, may have modified the wording of Favorinus' or of another source. If the original expression was τὰ βιβλία, it need not imply, as Mensching thinks it would, that Aristotle is accused of plagiarizing all the works of Speusippus. It could merely mean that he bought Speusippus' books and plagiarized some or many of his thoughts. Though Aristotle was in all probability influenced by Speusippus (cf. pp. 109-111 *supra*), the story told by Favorinus or by his source is highly suspect, as many other such stories of plagiarizing are.¹⁷

T 2

Since the transmission of the *Acad. Index Hercul.* has a bearing on some passages in it which refer to Speusippus (cf. T 2 and F 1, note 13, and on F 70 *infra*), it is necessary to discuss it briefly here. (For information concerning the *Acad. Index Hercul.* cf. Mekler's introduction to his edition and W. Crönert, "Die Überlieferung des Index Academicorum," *Hermes* 38 [1903], pp. 357-405.) The work, probably part of Philodemus' Σύνταξις τῶν φιλοσόφων (cf. Diog. Laert. X, 3; cf. also X, 24 and Crönert, *Kolotes und Menedemos*, p. 133) is extant in at least two papyri from Herculaneum, Nrs. 1021 and 164. Of these, the former is the only one that has been tran-

¹⁷ For Favorinus' interest in "plagiarism" cf. F 23 (Mensching) = frag. 55 (Barigazzi) with their respective comments. On this subject in general cf. E. Stemmlinger, *Das Plagiat in der griechischen Literatur* (Leipzig und Berlin, 1912), K. Ziegler, "Plagiat," *RE* XX (1950), cols. 1956-1997.

scribed, and it has served as the basis for all editions of Philodemus' work, including the latest by Mekler. Of Pap. Hercul. 164 only a few fragments, isolated from their respective contexts, were known to Mekler; the rest of the papyrus is still to be transcribed (cf. Addenda). At present, parts of Pap. Hercul. 1021 have been lost. There are, however, two transcriptions of it, one in Naples, the other in Oxford, the latter being the more complete of the two.

Three interrelated questions have been raised in connection with *Acad. Index Hercul.*: (a) Did the villa, where the library of Herculaneum was found, belong to L. Calpurnius Piso, Philodemus' patron and friend? (b) Did the library belong to Philodemus? (c) Do we have the *manus Philodemi* in some of the marginal notes found in Pap. Hercul. 1021? There is no need here to discuss at length the first two questions, because, even if affirmative answers are given to both of them, it does not necessarily follow that the third question, the only one which is of interest to us here, must also be answered in the affirmative. Whereas, if we find good reasons to give a negative answer to (c), then questions (a) and (b) should also probably receive a negative answer, at least with the information now available, since the only "evidence" for assuming that the villa belonged to Piso and the library to Philodemus has been the assumption that in the margins of Pap. Hercul. 1021 is found the *manus Philodemi*. It is well to state, however, that no ancient evidence of any kind connects the villa of the papyri with Piso.¹⁸ From what is known today, one can say that the works of Philodemus constitute the majority of those found in Herculaneum, that the library probably belonged to an Epicurean philosopher or sympathizer, and that there are instances of two copies of one and the same work. But none of these facts, nor all of them together, constitutes proof that we have here the remains of Philodemus' own library. As for question (c), the facts as Crönert states them are as follows: Pap. Hercul. 1021 was written by a professional but careless scribe, who often omitted words, corrected the text without erasing,

¹⁸ The main recent publication that identifies the owner of the villa of the papyri with Piso is H. Bloch, "L. Calpurnius Piso Caesoninus in Samothrace and Herculaneum," *American Journal of Archaeology* 44 (1940), pp. 485-493, esp. 490-493. Cf. however the remarks of R. G. M. Nisbet, *M. Tulli Ciceronis in L. Calpurnium Pisonem Oratio* (Oxford, 1961), pp. 186-188 (also p. 134, note on 68, 1), who unfortunately seems to accept Crönert's inferences concerning the Philodemian authorship of the marginal notes in Pap. Hercul. 1021.

etc. The κολλήματα were later pasted together by a careless κολλητής, with the result that the columns are often in the wrong order. Still later, a learned scholar indicated with symbols the correct order of the columns and added notes in the margin. What struck Crönert as noteworthy in this last case is that two marginal additions to the text in Pap. Hercul. 1021 appear as an integral part of the text in Pap. Hercul. 164. From this he inferred that the two marginal notes in question were not meant to supply accidental omissions by the scribe, and that they are not interpolations, either. Crönert thought that they are Philodemus' own corrections and changes; hence, the hand that made them is the *manus Philodemi*. Pap. Hercul. 164 is for him the final copy of the work. Cf. Crönert, *Kolotes und Menedemos*, pp. 183-184; *Rh. Mus.* 62 (1907), pp. 624-625; D. Comparetti, "La bibliothèque de Philodème," *Mélanges Chatelain* (Paris, 1910), pp. 118-129, esp. 123-124.

This hypothesis, however, is unlikely in itself and goes beyond the reasonable inferences that can be drawn even from the evidence as Crönert reports it. (Yet it is doubtful that Crönert's report is accurate, for he seems to have confused the facts with his own hypothesis, cf. Appendix III.) For one thing, we do not yet have a complete and accurate transcription of Pap. Hercul. 164, and more work must be done also on Pap. Hercul. 1021. In short, we still lack a truly critical edition of Philodemus' *History of the Academy*. It may well be that the evidence will tell in favor of the dependence of Pap. Hercul. 1021 on 164 rather than vice versa, or even that the two have an immediate common ancestor. For, *pace* Crönert, the two marginal additions in Pap. Hercul. 1021 may be due to a second hand which filled in the omissions of the scribe who copied the work. (Mistakes by a scribe also suffice to explain the confusion in the papyrus in the case of Apollodorus' verses and the repetition of a passage containing the names of students of Carneades [cf. Crönert, *Rh. Mus.* 62, 1907, p. 624].) Nor is it likely at all, as Crönert had himself suggested earlier (*Hermes* 38 [1903], pp. 369 and 400, n. 1), that Philodemus would have utilized for the revision of his work a defective text, which is also allegedly in disorder because of a careless κολλητής. Neither is there any evidence that Philodemus dictated his work to a scribe, nor that he indicated to the scribe the passages in other authors he wished to include in certain places of his own work. The conclusion seems to be unavoidable that the so-called *manus Philodemi* is not a sound hypothesis and that, unless

new evidence is forthcoming, it should be abandoned once for all (cf. A. Körte, *GGA* 169 [1907], p. 264; B. Hemmerdinger, *REG* 78 [1965], p. 328; G. Cavallo, *Cronache Ercolanesi* 1 [1971], p. 16 and n. 41).

Concerning T 2 (= pp. 37-40 [Mekler]), it should be said that in many cases the readings of the papyrus are uncertain and that several of the restorations of Mekler and others are highly conjectural.

1-3 Σπεύσιππος . . . διατριβήν. In the papyrus, the letters ΑΤΩΝ ΤΩΝ are written above διεδέξατο. Mekler considers them part of a scholion which he restores as ἄτ' ὦν [Πο]τών[ης υἱός. Buecheler, however, took the superscript to be part of the text, but read παρ' αὐτοῦ [Πλ]άτων[ος λαβ]ών. And also Jacoby (on *FGH* 328 F 224), though he adopts Mekler's restoration, considers the words in question to be part of the text, contending that in view of the disorder in lines 1-13 (cf. the following note) the superscript shows that some words which explained the election of Speusippus have dropped out. Even if Jacoby happened to be right, given the conjectural character of Mekler's restoration, we cannot be sure that the reason given by Philodemus for Speusippus' succeeding Plato was "because he was Potone's son," though this version is known and/or implied in other sources (cf. e.g. *Chron. Syr.*, pp. 116 and 118 [Baumstark] = T 19a: "Als aber Platon gestorben war, übernahm Speusippus, weil er sein Neffe war, die Schule Platons"). But even if this is what Philodemus wrote, his contention can only be considered a conjecture (of his or of his source) prompted by hostility to Speusippus and/or Plato, since it is highly unlikely that it would have been the reason given by Plato himself (cf. also p. 10 f. *supra*). It is noteworthy, however, that the position of the superscript favors Buecheler's restoration, since ΑΤΩΝ, at any rate, coming almost immediately after αὐτοῦ, looks like an explanation of this pronoun. If Buecheler's restoration belongs to the text (but there is no certainty that it does), it would make even more clear what παρ' αὐτοῦ διεδέξατο in any case implies, i.e. that Speusippus was appointed head of the Academy by Plato himself. Cf. further pp. 8-11 *supra*.

3-13 Σπεύσιππον . . . περίπατον. His view about lines 1-3 (cf. *ad loc.*) and the additions above the line which make line 38 of col. VI (= T 2, line 11) twice as long as the others, cause Jacoby to think

that the text here is in disorder. Because of the rather awkward repetition of the name Speusippus,¹⁹ he conjectures that the disorder is itself the result of Philodemus' insertion of lines 3-11 (. . . —τελῶν.), where Philochorus is cited for Speusippus' dedication of the statues of the Charites and for his epigram. According to Jacoby, in a history of the Academy the natural order would have been Σπεύσιππος παρ' αὐτοῦ διεδέξατο τὴν διατριβὴν κατέστρεψεν τ' ἔτη κατασχὼν ὀκτὼ τὸν περίπατον (cf. Diog. Laert. IV, 1 = T 1, lines 2-5). Since, moreover, the supplement ἔτ' οὔσας (line 4), if correct, suggests that the citation of Philochorus is not direct,²⁰ Jacoby conjectures that this quotation was taken by Philodemus from his source, the historian of the Academy who wrote probably after Sulla's devastation of Athens in 86 B.C. He also contends that the subject of γράφει in line 11 can hardly be Philochorus.

It seems, however, that there is some confusion in what Jacoby says. For the disorder in the papyrus, if it is such, need not go back to Philodemus himself, nor need it be so extensive as Jacoby believes. To begin with, Jacoby's interpretation presupposes that Pap. Hercul. 1021 is either Philodemus' own autograph or that it is the text "dictated" by Philodemus. Only so can he plausibly argue that Philodemus' "insertion" of lines 3-11 is responsible for the alleged confusion in the text. But Jacoby's supposition concerning the nature of Pap. Hercul. 1021 cannot be right (cf. the introductory note to T 2 *supra*). Moreover, if Philodemus took lines 3-11 from the historian of the Academy, as Jacoby thinks he did, then that passage was already part of the history of the Academy before Philodemus wrote, and there is therefore no reason why its position in the text, as well as the repetition of the name Speusippus, cannot go back to Philodemus' source.

The superscript in line 2, if it is part of the text, was probably accidentally omitted. And a similar explanation would account for the present state of line 11. In fact, in this last case the evidence speaks against Jacoby's hypothesis; for it seems that the scribe at first omitted the words ἥδη τὰ μέλη διαλυθέντα (the uncertainty of the restoration does not affect the point at issue here), and then wrote them with smaller letters (cf. on lines 11-13 *infra*) above the

¹⁹ The restoration of the name Speusippus in lines 1 and 3 is pretty certain.

²⁰ Because one would expect such a remark to have been made not by Philochorus but by somebody who lived a long time after Speusippus. Cf. Foucart, *Étude sur Didymos*, pp. 188-189; Jacoby on FGH 328 F 224.

line. There is therefore no compelling reason to think that Philochorus cannot be the subject of γράφει in line 11. (Mekler, *Acad. Index Hercul.*, pp. XXVIII-XXIX, Merlan, *Historia* 3 [1954-55], p. 65, n. 1,²¹ and others ascribe lines 11-27 to Philochorus; Jacoby, followed by Gigon, *MH* 15 [1958], p. 159 and n. 22, opposes this.) Since there is evidence of Philochorus' interest in the history of the Academy (cf. *FGH* 328 F 223 with Jacoby's comm.), and since the scribe at first omitted some words at the end of the line, not at the beginning, it is reasonable to ascribe lines 11-27 to Philochorus.

3-6 Σπεύσιππον . . . μουσεῖον. This text must be compared with Diog. Laert. IV, 1 (= T 1, 5-6): Χαρίτων τ' ἀγάλματ' ἀνέθηκεν (sc. Σπεύσιππος) ἐν τῷ μουσεῖῳ τῷ ὑπὸ Πλάτωνος ἐν Ἀκαδημείᾳ ἰδρυθέντι. From this we can see that Mekler's restoration of lines 3-5 is likely to be right. Buecheler's Φιλ[όχορος] must also be accepted. (Philochorus is cited apparently in connection with another epigram in *Acad. Index Hercul.*, col. II, 1-19 [pp. 19-20, Mekler] = *FGH* 328 F 59, cf. Mekler, p. XXVIII and Jacoby's comm. *ad loc.*) A serious problem arises with the restoration of the following words, however, if we assume that τὸ μουσεῖον must not be emended. Mekler, followed by Foucart, *Étude sur Didymos*, p. 188 and others, reads καὶ κατεχούσας τὸ μουσεῖον and comments, "κατέχειν de numinibus loca tuentibus sollemne" (cf. also LSJ, s.v. κατέχω II, 1, b). Jacoby objects that the position of κατεχούσας and its reference to the Charites are surprising. His own proposal, however, to read κατέχοντα τὸ Μουσεῖον, on the ground that we need a qualification of the time when the dedication took place, such as that implied in Diogenes Laertius, has the awkward result of making τὸ Μουσεῖον mean "the school," whereas in Diogenes Laertius the word almost certainly means "the *temenos* of the Muses."²² Nor is Jacoby right in thinking that there is need here to qualify the time when Speusippus dedicated the statues of the Charites. I see no such implication in T 1, lines 5-6. (It is noteworthy that A. Motte, *Prairies et jardins de la Grèce antique*, p. 423 infers from Diogenes Laertius that Speusippus'

²¹ Contrary to his own earlier contention that the passage comes from Hermippus (*TAPA* 77 [1946], p. 110 = *Kl. Schr.*, p. 151).

²² LSJ, s.v. μουσεῖον, I, 3, are almost certainly wrong in interpreting this word in Diog. Laert. IV, 1 (= T 1, 6) as "philosophical school and library." In the context, it is Ἀκαδημεία that means "the school," and μουσεῖον must refer to the *temenos* of the Muses.

dedication took place “du vivant même de Platon.”) But even if Jacoby is right in assuming that Speusippus made the dedication after Plato’s death, then the same thing is implied also in T 2, since here, too, the statement about the Charites comes after Speusippus’ accession to the headship of the Academy. Finally, if Jacoby is right, τὸ Μουσεῖον = “the school” must go back to Philochorus himself, for elsewhere in the *Acad. Index Hercul.* the words used for this purpose are περίπατος, διατριβή, and σχολή. But there is no evidence for such an early use of τὸ Μουσεῖον. For these reasons I have adopted Mekler’s restoration, though it must be admitted that even that restoration is merely a conjecture which may have to be modified when *Par. Hercul.* 164 is deciphered.

7-11 τάσδε . . . τελών. On Speusippus’ epigram cf. on F 86 *infra*.

11-13 καὶ γράφει . . . περίπατον. Whether these and the following lines come from Philochorus or not (cf. on T 2, 3-13 *supra*), it is clear that Philodemus gave another citation for Speusippus’ poor health and for the account of the election of Xenocrates that follows. Cf. Jacoby on *FGH* 328 F 224, who calls attention to the position of the *paragraphos* between lines 38/39 of col. VI (= T 2, 11-12), which is similar to that between lines 11-12 of col. VIII (citation of Ξνιοι) and that between lines 17 and 18 of col. VIII (citation of Timaeus). Though the restoration of line 11 is not entirely certain (cf. Mekler *ad loc.*: “sup. v. 38 O litteris minutioribus scripta habet ΔΑΥΠΝΩΜΕΝΓΑ, Ν Δ . ΥΠ . . ΜΕΝΩCΑΛΥCΟΥΤΑ, e P enotat Cr(önert) ΔΙΥΠΙVΙΜΕΝΗΔΙΑΛΥΘΟΝΤΑ), it almost certainly refers to Speusippus’ poor health at the time when he became head of the Academy (348/7 B.C.); and this is given as the reason for the short duration of his headship (cf. further on T 1, line 21 *supra*). The implication of T 2, lines 11-27 is either that Speusippus died before the election of Xenocrates (cf. on T 7 *infra*) or that he was so ill that he could no longer be the head of the Academy. The former, I believe, is the more likely possibility, if indeed Speusippus died in 339 B.C. (cf. T 8c). Since this comes from Philochorus or from another good source to which we also owe the following account of Xenocrates’s election, we may consider this information reliable. And if Speusippus was weak and ill during the last few years of his life, this would go a long way to explain why Hellenistic “biographers” told scandalous stories about his last

illness and death (cf. on T 1, lines 21-25, 21, 22-25, 31-32, and 32-33 *supra*).

14-27 οἱ δὲ . . . κατεσκευάσατο. This passage is almost certainly a unified account, the contents of which come from a reliable source, and must therefore be preferred to the version preserved by Diogenes Laertius and all the other sources which have Speusippus recalling Xenocrates and/or appointing him his successor (cf. on T 1, lines 21-22 and on T 2, lines 3-13 *supra*).

27-34 οἱ . . . ἡττων. The restorations Σπεύσιππος and καὶ τῶν ἡδονῶν ἡττων were conjectured by Gomperz, *WS* 4 (1882), p. 109, n. 9 on the basis of Diog. Laert. IV, 1 (= T 1, line 8). Even if they are correct, however, the notice is suspect, as it seems to come from a source hostile to Speusippus. It is noteworthy that it need not come from the people in the Academy who chose Xenocrates because they were pleased with his σωφροσύνη, since ὁ γὰρ Σπεύσιππος κτλ. may be a comment of Philodemus or of his source. Moreover, in Diogenes Laertius Speusippus' character is contrasted with Plato's, whereas here he is contrasted with Xenocrates. Yet the context would lead one to expect a contrast of Xenocrates with his rivals, Heraclides and Menedemos, rather than with Speusippus.

29-31 τὸν . . . σωφροσύνην. Cf. on T 3 *infra*.

T 1-2

The several parallels between the biographies of Academic philosophers in the fourth book of Diogenes Laertius and in the *Acad. Index Hercul.* support the inference that ultimately these two works go back to a single source, a history of the Academy which probably ended with Carneades and Clitomachus. The hypothesis of Wilamowitz, *Antigonos*, pp. 45 ff. that the use of Antigonos of Carystus in the biographies of Polemon, Crates, Crantor, and Arcesilaus shows that Diogenes used such a history and that also Philodemus excerpted from it is on the whole correct. It should be modified, however, in the light of the remarks of Leo, *Biographie*, pp. 54-74. One should add that it is not merely the use of Antigonos in the biographies mentioned above that shows that both Diogenes and Philodemus excerpted from a history of the Academy up to the end of the second century B.C., for there are other parallels,

too, between Diogenes and Philodemus. That this history, however, was not always reliable is shown by the fact that Diogenes' account of the Academic διαδοχαί is defective (cf. on T 1, lines 21-22). The fact that in the case of Xenocrates' election we know that Philodemus explicitly cites his source for the account he preserves (cf. on T 2, lines 11-13 *supra*) conclusively proves this point. As this source was probably Philochorus, it is possible that also the report about the members of the Academy's attitude towards Xenocrates (T 2, lines 27-31) comes from him.

Apart from the history of the Academy which is ultimately a source common to him and to Philodemus, Diogenes Laertius names the following authorities for some of his statements: The letter allegedly by Dionysius II (T 1, lines 12-16), Diodorus (T 1, lines 16-18), Caeneus (T 1, lines 18-19), Timotheus (T 1, lines 32-34), Favorinus (T 1, lines 67-69). There is a probably mistaken reference to Plutarch (T 1, lines 31-32), and Plutarch is probably Diogenes' source for the statement concerning Timonides (T 1, lines 66-67). A few statements and anecdotes are introduced merely by φασίν (T 1, lines 8-10 and 22-25). Finally, Diogenes must have had one or more sources for the catalogue of Speusippus' writings (T 1, lines 35-66). But apart from Plutarch, from Favorinus, from the letter by Dionysius II, and perhaps also from some of the pseudo-Speusippean letters (cf. on T 1, lines 21-22), we cannot ascertain whether he had direct access to any of the other sources he cites. However that may be, it is noteworthy that Diogenes has chosen notices and anecdotes which are mostly hostile to Speusippus (cf. p. 6 *supra*).

T 3

This text reproduces in very abbreviated form some of the notices we find in Diogenes Laertius (cf. T 1, T 4, and T 5). But the notion that Speusippus was ἀσπηρὸς τὴν γνῶμην is not found in Diogenes and is in fact incompatible with Diogenes' statement that Speusippus was easily overcome by pleasures (cf. T 1, line 8). Consequently, Adler, in her edition of Suidas, is probably right in ascribing T 3 to Hesychius of Miletus. Hesychius himself did use Diogenes Laertius, but undoubtedly he also made use of other sources. (On him cf. Suidas, s.v. 'Ἡσύχιος Μιλήσιος [II, p. 594, 15-25], H. Schulz, *RE* VIII [1913], cols. 1322-1327, Adler, *RE* IV A [1931], cols. 706-708, 709.) Unless this statement in Suidas is the result of

his having confused Speusippus with Xenocrates (cf. Plutarch, *De Vit. Pud.* 533 C Ξενοκράτης . . . αὐστηρὸς ὦν τὸν τρόπον, Cicero, *De Off.* I, 30, 109 *Xenocratem . . . severissimum philosophorum* [unnecessarily excised by Heumann]), we have here a favorable evaluation of Speusippus' character in the biographical tradition. On καὶ εἰς ἄκρον ὀξύθυμος cf. on T 1, lines 8 and 8-9 *supra*.

T 4

Cf. on T 1, line 4 *supra*.

T 5

In the list of Plato's students preserved in the *Acad. Index Hercul.*, col. VI, 1 ff. (p. 33 [Mekler]) the names of Speusippus and Xenocrates do not occur. The reason is undoubtedly the bad state of preservation of Pap. Hercul. 1021. Speusippus and Xenocrates appear also in the list of Plato's students preserved in the life of Plato by Ibn-al-Kifṭī (cf. T. Roeper, *Lectiones Abulpharagianae Alterae: De Honaini Vita Platonis*, p. 13), the Greek source of which was not Diogenes Laertius. On Plato as the "educator" of Speusippus cf. T 24a-b *infra*. On Speusippus as a member of the Academy cf. pp. 8-11 *supra*.

T 6

Pap. Oxyrh. I, 12 (written perhaps between 200 and 250 A.D.) contains part of a chronological work which gives a list of the chief events in Greek, Roman, and Oriental history. It is dated by Olympiads and by archons at Athens. The preserved part refers to the years 355-315 B.C. The author notes important political and literary events and those referring to the Olympic games. The chronicle was probably composed in Roman times and was presumably excerpted from a larger work (cf. Grenfell and Hunt, *The Oxyrhynchus Papyri*, I [London, 1898], pp. 25-26; Jacoby, *FGH* 255 with comm. *ad loc.* in II, B, p. 831). This text implies that Speusippus succeeded Plato as head of the Academy at the latter's death. Cf. on T 1, lines 4-5 *supra*.

T 7

According to this text, which seems to come from Apollodorus (cf. *FGH* 244 F 345), Xenocrates succeeded Speusippus in Ol. 110, 2 = 339/8 B.C., in the archonship of Lysimachides. As the latest

possible year for the end of Speusippus' headship is 340/39 (cf. on T 1, lines 4-5 *supra*), it seems that there was a period (a few days or a few months? a whole year?) during which the Academy had no head (cf. Jacoby, *Apollodors Chronik*, pp. 312-314, and his comm. on *FGH* 244 F 344-346 [II, B, pp. 809-810]). It is quite likely that Speusippus died before the election of Xenocrates. In fact, this seems to be the probable implication of T 2, lines 11-27 (cf. on T 2, lines 11-13 and on T 1, lines 21-22 *supra*); cf. also on T 8c *infra*.

T 8a-d

These notices ultimately come from Eusebius; but the first, the second, and the fourth are clearly wrong. Thus T 8a is even hard to explain: Speusippus cannot have "flourished" in 395 B.C., nor can he have been born in that year either (cf. p. 7 *supra*). And it is hardly likely that this notice can be explained as referring to the year in which Speusippus became Plato's student, as Rhode, *Rh. Mus.* 34 (1879), p. 622 = *Kleine Schriften*, I (Tübingen und Leipzig, 1901), p. 184 and Merlan, *Biographie*, p. 199, n. 3 = *Kl. Schr.*, p. 128 conjecture from different points of view (against the former cf. Jacoby, *Apollodors Chronik*, p. 313, n. 1). T 8b is incorrect, since Plato died and Speusippus became head of the Academy in 348/7 B.C., i.e. in the first, not in the fourth year of Ol. 108 (cf. on T 1, lines 4-5 *supra*). T 8d is completely off the mark, because Speusippus in all probability died in 339 B.C. (cf. T 8c and on T 1, 21-22 *supra*). Wilamowitz, *Antigonos*, p. 195, n. 7, followed by Jacoby, *Apollodors Chronik*, p. 314 and n. 2, tries to explain the mistake in two stages. First Speusippus was confused with Xenocrates; second 316 is not the year of the latter's "floruit" but that of his death. This explanation is 'unconvincing, however, since the two names are not at all similar to each other and Xenocrates died either in 315/4 or in 314/3 B.C. (cf. Jacoby, *op. cit.*). It is more likely that this notice about Speusippus was invented because of the story that has Speusippus attending Cassander's wedding to Thessalonike in 316 B.C. (cf. on T 1, lines 9-10 *supra*). (Menedemus of Pyrrha is associated with Speusippus also in T 33 and is also mentioned in T 2, lines 19-27, in connection with Xenocrates' election.) Also Merlan, *Biographie*, p. 211 = *Kl. Schr.*, p. 140 explains the confusion in T 8d as originating with the story of Speusippus' having attended Cassander's wedding, but he does so on the assumption that the anecdote refers to an event that took place in 340 B.C. (against this

cf. on T 1, lines 9-10 *supra*). Confusion with another Speusippus is unlikely because of his association here with Menedemus. Finally, T 8c is likely to be correct (cf. p. 7 *supra*).

T 9-10

These texts contain nothing except the standard succession Plato-Speusippus-Xenocrates. (Theodoretus mentions Speusippus also in V, 65 [p. 142, 14], but only for polemical purposes.)

T 11

Διὰ τοῦτο. Cf. the preceding passage in Themistius (254 B-255 A [pp. 34, 13-35, 21]), from which it is clear that this phrase refers to the qualities of the "philosophic soul."

Σπεύσιππος . . . Ξενοκράτην. Obviously Themistius is following the version that has Speusippus recalling Xenocrates and urging him to take charge of the Academy. Cf. on T 1, lines 21-22 *supra*.

T 12

On pseudo-Galen's *Historia Philosophica* cf. Diels, *Dox. Gr.* pp. 233-258. In its main part, that is, from ch. 25 to the end, the work is an excerpt of the pseudo-Plutarchean *Placita*. In the first part the author's source was a compendium that also Sextus Empiricus used. The date of composition is ca. 500 A.D.

Chapter 3, of which T 12 is part, is a résumé of the standard ancient philosophical histories written according to sects. Our text is part of the account of the "Old Academy," and it preserves the common but probably mistaken tradition (cf. on T 1, lines 21-22 *supra*) that Speusippus himself appointed Xenocrates as his successor. The wording here presents a few points of interest. Thus Speusippus' illness has become the "arthritic diseases" (cf. on T 1, line 21 and on T 2, lines 11-13). Xenocrates is here appointed as the official interpreter of Plato's doctrines, and it is implied that Speusippus himself was also such an interpreter. This may of course be due to the influence of a sceptic source; but it is noteworthy that, so far as we know, Xenocrates' philosophy was indeed based on an exegesis of Plato (cf. Cherniss, *Riddle*, pp. 43-48), whereas there is no evidence—it is in fact improbable—that Speusippus' was (cf. esp. pp. 12 ff. *supra*).

T 13

On the "successions" of philosophers and schools in **Diogenes** Laertius and other ancient authors cf. W. von Kienle, *Die Berichte über die Sukzessionen der Philosophen in der hellenistischen und spätantiken Literatur* (Berlin, 1961), pp. 9-37; 79-96. So far as the Old Academy is concerned this is the standard version of "successions." Cf. also T 12, T 14, etc. (See now Ammon's list of philosophers in a fourth cent. A.D. papyrus from Panopolis, *P. Duk. inv. G 178* [cf. W. H. Willis, *Illinois Classical Studies* 3, 1978, pp. 145-151], where Speusippus' name occurs in what appears to be a list of heads of the Academy.)

T 15

Academica I, 4, 17-18 is part of the longest exposition to be found in Cicero's works (I, 4, 13-11, 42; cf. also I, 12, 43; *De Nat. Deorum* I, 7, 16) of Antiochus of Ascalon's view about the essential unity of doctrine (particularly in ethics) of the Old Academy, the early Peripatos, and the Stoics. Of concern to us here is the notion of the unity of doctrine of the Old Academy (from Plato and Speusippus to Xenocrates and Polemon) and the early Peripatos. Similar statements, most of which include Speusippus, occur in *Academica* II, 5, 15; *De Oratore* III, 18, 67; *De Finibus* IV, 2, 3 and 5; V, 1, 2; 3, 7-8; *De Legibus* I, 13, 37-38 (= F 78d), etc. The view that the Old Academy was "dogmatic," the New "sceptic," must be earlier than Antiochus, however, since Philo of Larissa is said to have denied that there were two Academies (cf. Cicero, *Academica* I, 4, 13; J. S. Reid, *M. Tulli Ciceronis Academica* [London, 1885], pp. 58-59). This distinction between the two Academies (which seems also to appear in *Acad. Index Hercul.*, col. XVIII, 7 ff. [pp. 67-68 Mekler]) may have been made at any time from Arcesilaus to Carneades and Clitomachus. But, besides the fact that from the point of view of the scepticism of the New Academy the doctrines of the several members of the Old Academy are "dogmatic" (cf. T 20, where Numenius regards this as a point favorable to the Old Academy), the philosophy of Speusippus is essentially different from those of Plato, Xenocrates, etc., and also from that of Aristotle (cf. esp. pp. 12-85 *supra*).

The words "*quasi heredem*" (even if this is a rendering of *διάδοχος*, as most commentators assume) stress the family relationship between Plato and Speusippus to explain the latter's choice as head

of the Academy (cf. also on T 2, lines 1-3 *supra*). If the wording here reflects Antiochus' own, then we may infer that for Antiochus Speusippus was not of the same philosophical importance as Xenocrates and Aristotle, or that he did not see too much in common between Speusippus' and Plato's thought. The notion that the Academy and the Peripatos took their respective names from the places where Xenocrates and Aristotle taught but that the doctrines of the two schools were essentially the same became a commonplace with the late Neoplatonists (cf. T 16a-18). It probably goes back to Antiochus and need not be earlier than him (cf. Düring, *Aristotle Biogr. Trad.*, pp. 406 and 407).

In *De Finibus* IV, 2, 3-4, Cicero mentions Speusippus, Aristotle, Xenocrates, Polemon, and Theophrastus as philosophers who anticipated the Stoics' tripartite division of philosophy into logic, physics, and ethics (cf. *De Finibus* IV, 4, 8 ff.). However, since this division was also frequently ascribed without good reasons to Plato himself (cf. e.g. Cicero, *Acad.* I, 5, 19; Apuleius, *De Platone* I, 3; etc.), this passage of the *De Finibus* has little evidential value in so far as Speusippus and Aristotle are concerned. It is noteworthy that Sextus in *Adv. Math.* VII, 16 ascribes the tripartite division of philosophy (before the Stoics) to Plato *δυνάμει* and explicitly to Xenocrates and the Peripatetics (cf. Heinze, *Xenokrates*, pp. 1-2).

T 16a-18

All these Neoplatonic texts seem ultimately to go back to Ptolemy-al-Gharib's (Ptolemy the Unknown) biography of Aristotle (cf. Düring, *Aristotle Biogr. Trad.*, pp. 116 ff., 137 ff., 162-163, 469-476), a life which has now been discovered in an arabic translation (cf. Düring, "Ptolemy's *Vita Aristotelis* Rediscovered," *Philomathes*, pp. 264-269).

We find in these texts Antiochus' notion (T 15) that, though Speusippus succeeded Plato as head of the Academy, Plato's two most eminent students were Xenocrates and Aristotle, that they taught the same doctrine, and that it was only because of the place where each taught that one school was called Academy and the other Peripatos. T 16a-18 contain an additional assertion which in all probability is due to the wrong notion that when Speusippus succeeded Plato Aristotle was in Macedon, the implication being that if Aristotle had been in Athens he would have been Plato's successor (n.b. how Speusippus' family relationship to Plato is

stressed immediately before the statement that Aristotle was in Macedon). This notion seems to be the result of a confusion with the situation at the time of Xenocrates' election (cf. T 2, lines 14-27). It is noteworthy that Ammonius and Olympiodorus (cf. Düring, *Aristotle Biogr. Trad.*, pp. 109, 188, 407, 409-410) omit Speusippus altogether.

T 19a

Düring, *Aristotle Biogr. Trad.*, pp. 188-189 correctly argues—against the interpretation of A. Baumstark, *Aristoteles bei den Syrern vom V.-VIII. Jahrhundert.*, I (Leipzig, 1900), pp. 105-130—that this anonymous Syriac life of Aristotle ultimately comes from Ptolemy-al-Gharib and that it derives from the same tradition as the Greek *Vita Vulgata*. The statement that Speusippus succeeded Plato “because he was his nephew” need not be more than the inference drawn by the translator or by his source from texts such as we find in T 16a-18 (cf. also on T 2, lines 1-3 *supra*). Düring suggests that the statement concerning Speusippus' request to Aristotle to return to Athens is in all probability due to misunderstanding of the Greek, such as the *στέλλεται* of T 17a. It is possible, however, that the statement may be due to confusion with the tradition that has Speusippus “recalling” Xenocrates, cf. on T 1, lines 21-22. The rest of T 19 has to do with Aristotle's teaching at the Lyceum and is of no concern to us here.

T 19b

(I have printed Baumstark's translation of Bedjan's text. E. A. Wallis Budge, *The Chronography of Bar Hebraeus*, Vol. I [Oxford, 1932], p. 36 translates the passage as follows: “Plato died at the age of eighty-two years, and Speusippus, the son of his uncles' sister>[?], and not Aristotle, stood in his place, even though he was his disciple, but he did not agree with his opinion, especially on the subject of the migration of souls from bodies to bodies, which he opposed strongly.”) Notices about Aristotle's doctrinal disagreements with Plato, as well as about his alleged personal quarrels with him, are attested in the ancient biographical tradition (cf. Düring, *Aristotle Biogr. Trad.*, pp. 318-332). I know of no ancient parallel, however, to Bar Hebraeus' notion that Aristotle did not succeed Plato as head of the Academy because he was opposed to the

latter's doctrine. This notion, whatever its source, may be disregarded (cf. pp. 8-11 *supra*).

T 20

The passage in Eusebius which precedes this text (*PE* XIV, 4, 13-16 [II, pp. 267, 9-268, 10]) contains no additional information concerning Speusippus and the Old Academy.

Numenius finds acceptable the view of the Old Academy as "dogmatic," since he considers that the *ἐποχή* and related sceptical notions are totally foreign to Plato (cf. also Numenius, frags. 2-8 [Leemans] = frags. 25-28 [des Places]). Nevertheless he is also aware and disapproves of the fact that Plato's successors in the Old Academy rejected many of his doctrines. This is the point that interests Numenius, that the Old Academy did not remain loyal to Plato, and he here mentions none of the doctrines of Speusippus, Xenocrates, and Polemon. For this lack of loyalty he blames not only Plato's successors (T 20, lines 9 ff.) but also the "obscurity" of Plato himself (frag. 1 [p. 115, 4-12, Leemans] = frag. 24, 57-66 [des Places]; cf. H. De Ley, *L'Antiquité Classique* 36 [1967], pp. 199-200).

The word *ἐκείνου* in line 10 may be neuter. It is tempting, however, to take it as masculine and refer it to Xenocrates (as des Places, *Numenius*, p. 63, n. 3 suggests), cf. lines 12-13 καὶ οὐ μὲν βούλομαι τι φλαῦρον εἰπεῖν διὰ Ξενοκράτη, μᾶλλον μὴν ὑπὲρ Πλάτωνος ἐθέλω; and in the same Numenian fragment (1 [p. 114, 13-14, Leemans] = 24, 37-38 [des Places]) τὰ δὲ τῶν Στοιχῶν ἐστασίασται, ἀρξάμενα ἀπὸ τῶν ἀρχόντων. If this is so, Numenius must have thought that Xenocrates, the very man who read his doctrines into Plato's text (cf. comm. on T 12 *supra*), differed more widely from Plato than Speusippus did.

T 21

The first part of this text reflects the same tradition about Speusippus, Xenocrates, and Aristotle as we find in T 15, and it is quite likely that in this respect Augustine is indebted to Cicero. But Augustine finds that Plato's doctrine, in which he sees close affinities to Christian thought (cf. *De Civ. Dei* VIII, 10-11), was continued by men such as Plotinus, Iamblichus, Porphyry, and Apuleius, who chose to call themselves Platonists rather than either Academics or Peripatetics. It is unlikely that Augustine had first hand evidence about Speusippus' polytheism.

T 22-23

In the first passage Themistius praises Plato, Aristotle, Speusippus, and Xenocrates for possessing a higher “power” or “honor” (ἀρχή) than that given to magistrates; their ἀρχή is that which comes from knowledge (ἡ ἀπὸ τῶν λόγων; cf. the schol. AΠ: ἡγουν ἡ ἀπὸ τῆς γνώσεως τιμὴ ἐμοὶ τῶν πάντων ὑψηλοτέρα). In the second text Themistius denies that either Speusippus or Xenocrates is the true heir (κληρονόμος) to the highest stage of the divine Plato’s doctrine, the unity of political power and philosophy in one man (cf. Plato, *Republic* 473 C-D). The two passages are consistent with one another, since the first refers to the philosopher, not to Plato’s “philosopher-king,” as the second does.

T 24a-b

These two passages are not parallel to [Plato], *Epist.* VII, 344 A-B, as Stenzel, col. 1636, 40-54 and others think, since the method of “education” described by Plutarch has nothing to do with the philosophic training advocated in the seventh *Epistle*. The Platonic text which offers the closest parallel to T 24a-b is *Laws* 729 B-C, a passage that Plutarch or his source may have had in mind: παισὶν δὲ αἰδῶ χρηὴ πολλήν, οὐ χρυσὸν καταλείπειν. οἴομεθα δὲ ἐπιπλήττοντες τοῖς νέοις ἀναισχυντοῦσιν τοῦτο καταλείψειν· τὸ δ’ ἔστιν οὐκ ἐκ τοῦ νῦν παρακελεύματος τοῖς νέοις γιγνόμενον, δ παρακελεύονται λέγοντες ὡς δεῖ πάντα αἰσχύνεσθαι τὸν νέον . . . παιδεία γὰρ νέων διαφέρουσα ἔστιν ἅμα καὶ αὐτῶν οὐ τὸ νουθετεῖν, ἀλλ’ ἅπερ ἂν ἄλλον νουθετῶν εἴποι τις, φαίνεσθαι ταῦτα αὐτὸν δρῶντα διὰ βίου. For it is by such a method that Plato is said to have turned Speusippus away ἐκ πολλῆς ἀνέσεως καὶ ἀκολασίας and to have aroused in him great respect (αἰδῶ τε πολλήν) and admiration for himself and for philosophy. And to those friends who rebuked him for not admonishing the youth (τὸ μειράκιον) Plato replied that he greatly admonished him (πάνυ νουθετεῖν), since by his own manner of life (τῷ βίῳ καὶ τῇ διαίτῃ) he provided him with the opportunity to observe the difference between shameful and good things. This anecdote comes from a tradition which is favorable to Speusippus, for he is here said to have been converted by Plato to philosophy. It is possible, however, that from a statement or statements similar to that made by Plutarch at the beginning of T 24a about Speusippus’ great self-indulgence (ἄνεσις; cf. Plato, *Republic* 561 A 3-4 τὴν τῶν μὴ ἀναγκαίων

καὶ ἀνωφελῶν ἡδονῶν ἐλευθέρωσιν τε καὶ ἄνεσιν; *Laws* 637 C 2 τὴν τῶν γυναικῶν παρ' ἡμῶν ἄνεσιν) and intemperance (ἀκολασία) arose the unfavorable view of Speusippus' character which we find in some of the anecdotes hostile to him (cf. e.g. T 1, lines 7-10 [where we find also the contrast with Plato's character], T 1, lines 12-14, T 38, T 39a-b, T 41).

The story about Plato's admonishing Speusippus by his own manner of life is introduced in T 24a to illustrate the point Plutarch is there making, namely that we ought to be gentle to a brother's children. Since Plutarch says nothing about his source, it is impossible to assess the reliability of this story. The parallel passage from the *Laws* cited above does not necessarily preclude the possibility that there may be a kernel of truth in this anecdote, for not infrequently Plutarch and other ancient writers see history through what they regard as the ideal and essential truth. Nevertheless, the fact that a somewhat similar story is told in T 24b about Xenocrates and Polemon shows that the method of education advocated by Plato had become a *topos* in the biographical tradition about philosophers. And so a cautious attitude towards the reliability of such anecdotes is necessary.

T 25a-d

These four texts mention Speusippus as the person who was asked by Plato when angry to punish a disobedient slave. In all our other sources (cf. Riginos, *Platonica*, p. 155) we find Xenocrates instead of Speusippus. This divergency, the existence of similar stories about Plato and about others, and the fact that the refusal to punish slaves in anger is probably of Pythagorean origin (cf. Riginos, *op. cit.*, pp. 155-156 with n. 16) show that the story told in T 25a-d is a *topos* and therefore suspect.

T 26

Since the second Platonic *Epistle* is certainly spurious (cf. Cherniss, *AJP* 54 [1933], pp. 179-181 = *Selected Papers*, pp. 390-392; Morrow, *Plato's Epistles*, pp. 109-118; Edelstein, *Plato's Seventh Letter*, pp. 134-138), what T 26 says about Speusippus is more than suspect. It is amusing to see, however, that, in order to "explain" why Speusippus requests that Dionysius should send him Philiston (the famous physician of Syracuse), both Harward (*Platonic Epistles*, p. 175, n. 29), who accepts the letter as Platonic,

and Morrow, (*op. cit.*, p. 198, n. 10), who rejects it, refer to Diog. Laert. IV, 3 and to the Socratic *Letters* XXXIII and XXXV for Speusippus' poor health. Apart from the spuriousness of these letters, however, *Epistle* XXXIII and Diogenes Laertius refer to the poor health of Speusippus towards the end of his life (i.e. ca. 340/39 B.C.), whereas the second Platonic *Epistle* pretends to have been written either in 364 or in 360 B.C.

T 27

On the spuriousness of [Plato], *Epist.* XIII cf. Heidel, *Pseudo-Platonica* (Baltimore, 1896), pp. 38-39 with note 51; Edelstein, *Plato's Seventh Letter*, pp. 131-133. Therefore, the information that (in 366 B.C. or shortly thereafter) Speusippus was about to marry his niece can be disregarded.

T 28

The testimony of this letter may be rejected both because of the spuriousness of [Plato], *Epist.* XIII, on which it depends (cf. T 27 with comm.), and because the letters ascribed to Chion of Heraclea are not earlier than the Augustan period and were written by an author who had little knowledge of the fourth century B.C. On these letters cf. I. Düring, *Chion of Heraclea. A Novel in Letters* (*GHA* 57, 1951:5), pp. 7-25 and A. Billault, "Les lettres de Chion d'Héraclée," *REG* 90 (1977), pp. 29-37.

The adjective *χαρίστερος* here applied to Speusippus (T 28, line 11) is echoed in a poem by Gregory of Nazianzus (*Carminum Liber* I, 2, 10, line 308 [*PG* 37, col. 702]) where he is called *χαρίεις*. This statement occurs in a context hostile to Plato and to ancient philosophers in general, cf. I. Düring, *Herodicus The Crateteian* (Stockholm, 1941), pp. 167-168 and Riginos, *Platonica*, p. 68.

T 29-31

The reliability of the information provided by these texts depends upon whether or not one accepts as genuine Timonides' account of Dion's expedition against Dionysius II. The work ascribed to Timonides appears to have been in the form of a letter or letters addressed to Speusippus. This seems to follow from Plutarch's statement in T 31 (cf. Jacoby's comm. on *FGH* 561). The testimony of Diogenes Laertius (T 1, lines 66-67), who speaks of *ιστορίαι*, is of no significance, since in all probability he owed his information

about Timonides to Plutarch himself (cf. E. Schwartz, *RE* V [1903], col. 742, 37 ff.; W. H. Porter, *Plutarch: The Life of Dion* [Dublin, 1952], pp. xx; Jacoby, *op. cit.* with note 1), the only extant ancient writer who used Timonides. If this is so, we must suppose that Speusippus published Timonides' work, or that Timonides did so, or that somebody else did so after Speusippus' and/or Timonides' death. Most critics today consider this work to be genuine (cf. e.g. Jacoby, *op. cit.*; W. Capelle, *RE* VI A [1937], col. 1305 f.; Harward, *Platonic Epistles*, pp. 53-59; W. H. Porter, *op. cit.*, p. xxii; H. Berve, *Dion* [*Akad. Wiss. Lit. Mainz*, Abh. nr. 10, 1956], pp. 748-749). To my mind, however, the epistolary form of Timonides' narrative and the fact that no extant ancient historian but Plutarch seems to cite it are strong reasons for doubting its authenticity.²³ The argument that "Timonides'" narrative is that of an eye-witness does not suffice to exclude a forger: for he may have borrowed his description from a source unknown to us.

However that may be, it is likely that not only T 31 but also T 29 and T 30 come from "Timonides." In these three texts the following information about Speusippus is given. T 29: Plato himself was responsible for introducing Dion to Speusippus, his purpose being that Dion's character be tempered and sweetened by association with a charming company that in an appropriate way indulged in graceful diversions. Such a man was Speusippus, and Plutarch adds that because of this Timon in his *Silloi* (frag. 56 [Diels]) referred to him as "good at a jest." (Theodorus Prodromus, *Epist.* [PG 133, p. 1242], however, perhaps rightly, takes Timon's statement to be derogatory of Speusippus.) When Dion sailed to Sicily he gave to Speusippus, his most intimate friend at Athens, a country property he had bought. T 30: Speusippus, who went with Plato to Sicily

²³ Jacoby's contention that Ephorus made use of Timonides' narrative (*FGH* comm. on 561 [III, b, p. 521] and the volume of notes p. 308, n. 8) is a typical example of unsubstantiated "Quellenforschung." Taking as certain Schwartz's notion that in book XVI, chs. 6, 9-13, and 16-20 Diodorus is indebted to Timonides' narrative, which is preserved by Plutarch, Jacoby suggests that the lacuna in Diodorus' account of Sicilian affairs between Dion's expedition and Timoleon is to be explained by Diodorus' ultimate dependence on Timonides; and, since Ephorus is the source of Diodorus XVI, chs. 1-20, it follows that Ephorus himself used Timonides. But, to mention only one weak point in Jacoby's thesis, there is no reason to think that Plutarch's account in his life of Dion is indebted to Timonides except when the latter is explicitly cited; and it is noteworthy that none of the points Plutarch explicitly ascribes to Timonides appears in Diodorus.

during the latter's third visit, and his companions urged Dion to free Sicily and conveyed to him the eagerness of the population for Dion's lending his presence and name in the fight against Dionysius. (This text probably influenced the author of *Epist. Socr.* XXXVI: Σπεύσιππος . . . , αἴτιος τοῦ ἐς Σικελίαν στόλου ὁμολογῶν εἶναι.) Dion, however, secretly collected mercenaries and concealed his purpose. Timonides, apparently a member of the Academy, was one of those who joined Dion. T 31: so far as Speusippus is concerned, we learn from this text that Timonides addressed to him his account of Dion's expedition.

Whether authentic or not, it is noteworthy that in these texts we find a tradition favorable to Speusippus and that T 29 gives a description of his character essentially at variance with that in Diogenes Laertius and other authors who reflect a tradition hostile to him.

T 32

This counsel given by Speusippus to Dion comes from a letter which was probably available to Plutarch. In the catalogue of Speusippus' writings (T 1, line 59) we find mention of "Letters to Dion, Dionysius, Philip." It is hardly likely that such letters were genuine, but for this question I must refer the reader to the introduction to my *Pseudo-Speusippean Letters*. This text too is part of a tradition favorable to Speusippus.

T 33

As Cherniss, *Riddle*, p. 63 has pointed out, this scene, with the students bending over a gourd, is an imitation of the similar scene in Socrates' *Phrontisterion* in Aristophanes' *Clouds* 191 ff. (with κύψαντες in line 21 cf. *Clouds* 191 ἐγκεκυφότες and Starkie's note *ad loc.*). In most of this fragment (lines 11-37) Epicrates parodies the method of division and classification for which the Academy must have been notorious (cf. pp. 64 ff. *supra*). And the mention here of Plato and Speusippus is perhaps significant in as much as Plato's *Phaedrus*, *Sophist*, and *Politicus* and Speusippus' work "On Similar Things" (cf. F 6-27 with comm. *ad loc.*) must have made the method of natural classification well known in Athens. (The Menedemus mentioned in line 2 is Plato's student, not the Eritrean philosopher. Jaeger, *Diokles von Karystos* [Berlin, 1938], pp. 9-10 and others think that the Sicilian physician mentioned in lines 27-28 is

Philiston, who appears also in T 26 [cf. comm. *ad loc.*] and in *Epist. Socr.* XXXVI in connection with Speusippus.) This comic parody, however, can hardly be considered historical evidence about the activity of the Academy or about the prominent position of Speusippus within the Academy towards the end of Plato's life, as Fischer, p. 33 and others think it is.²⁴

T 34

This anecdote obviously comes from a source favorable to the Academy and hostile to Aristotle. It is really concerned with the alleged attitudes of Xenocrates and of Aristotle towards Plato. Speusippus' importance is purposely diminished, in order that Xenocrates may appear as Plato's most important student and true successor (cf. Gigon, *MH* 15 [1958], p. 160). Speusippus is first referred to as one of several students that Plato preferred to Aristotle. Then he is said to have been ill, and he could therefore not be present nor intervene when Aristotle "forced" Plato to stay indoors. Finally, Speusippus is mentioned as being present when Xenocrates returns and restores to Plato the use of the garden. Fischer, pp. 35-36, Merlan, *Biographie*, pp. 204-205 = *Kl. Schr.*, pp. 133-134 and others think that this text is basically reliable; Gigon (*op. cit.*, p. 154) is not so sure. One must say, however, that this undignified story is unworthy of the little we know about Plato and Aristotle. If it were true, it is hardly likely that Aristotle would still have been considered a member of the Academy at the time of Xenocrates' election (cf. T 2, lines 14-27). And, though Speusippus may already have been a weak man when he took over the Academy (cf. T 2, lines 11-13), it is hard to imagine that he and Plato's other students would have tolerated the situation envisaged here until Xenocrates at his return to Athens put an end to it. Rather, "the story in

²⁴ J. Glucker, *Antiochus and the Late Academy*, pp. 163-164 with n. 10 tries to rehabilitate the testimony of Epicrates on the grounds that Aristophanes' *phrontisterion* of Socrates is totally imaginary whereas the Academy is not and that the fragment contains typically Platonic vocabulary (cf. also Kock, *Comm. Attic. Frag.*, II, p. 288). The point at issue, however, is whether Epicrates' parody can be considered reliable evidence for Plato's oral instruction in the Academy; and the very fact that he is imitating the similar scene in Aristophanes' *Clouds* renders his testimony suspect. There is simply no way of measuring the distance between a joke and reality in cases in which we have no information independent of a poet's parody.

Aelian is a good example of Hellenistic romance, stylistically well built up from the introductory τὴν πρώτην to the climax in the last sentence" (Düring, *Aristotle Biogr. Trad.*, p. 320).

T 35

The *symposia* offered by Plato and Speusippus are praised here for providing those who attended with an opportunity for showing reverence towards the divine, cultivated intercourse with one another, and, most of all, relaxation and learned conversation (φιλολογία). (Eustathius [*Ad. Odys.* A, 110, p. 1398, Rom.] repeats this information, which he probably got from Athenaeus.) These *symposia* are mentioned in contrast to those offered by Lycon (notorious for their excesses of luxury, drinking, eating, etc.) and by all those who came after Plato and Speusippus. Since the passage is really about Lycon, beginning and ending with him, and since at the beginning of it the authority cited is Antigonus of Carystus, Wilamowitz, *Antigonos*, pp. 84-85 and 264 is probably right in ascribing the whole of T 35 to him. What is said here about Speusippus confirms Wilamowitz's hypothesis, since elsewhere (T 39a-b) Athenaeus speaks of Speusippus as φιλόδοκος. Fischer, p. 33 cites this text, together with T 33 (cf. *ad loc.*), as evidence for the importance of Speusippus in the Academy towards the end of Plato's life. It is a question, however, whether Antigonus had real evidence about the *symposia* offered by Plato and Speusippus or merely relied on their written work. Cf. T 46 *infra* with comm. *ad loc.*, Plato's *Symposium* up to the arrival of Alcibiades, and n.b. *Laws* 671 C-D, *Protagoras* 347 C-D.

T 36

Since Heraclides' interest in the Pythagoreans and in Plato is attested (cf. e.g. frags. 40-41, 104-113c [Wehrli], Cherniss I, pp. 550-557, and comm. on F 61a-b with note 199), it is possible that there is some truth also behind Diogenes' assertion here concerning his relation to Speusippus. Παραβάλλειν with the dative means "to be a student of" (cf. LSJ, s.v. παραβάλλω B, I *sub finem*), but such statements must be taken *cum grano salis* when they refer to the early Academy. (Wehrli, *Sotion*, p. 50 would explain Heraclides' association with Speusippus by their interest in Pythagoreanism.) It is possible that Heraclides was also influenced by Aristotle. But the statement of Sotion is hardly sufficient evidence to consider

him to have been a Peripatetic philosopher, as Diogenes Laertius and Wehrli think he was.

T 37

This is the concluding sentence of Plato's alleged testament, the authenticity of which, however, is doubtful. In it Speusippus is appointed as one of the executors of Plato's last will. On this text cf. also pp. 10-11 *supra*.

T 38

Cf. on T 1, lines 9-10. This text may imply that a poem (or poems) allegedly by Speusippus was in circulation.

T 39a-b

(In T 39a, line 1, τούτων refers to the Epicureans, Cyrenaics, and other hedonists.) In the biographical tradition favorable to Speusippus he appears as Dion's friend and urges him to free Syracuse from the tyranny of Dionysius II (cf. T 29-30 and 32). It was only to be expected that Dionysius should hate Speusippus. And so one or more later rhetoricians created a body of letters allegedly from Speusippus to Dionysius (cf. T 1, line 59) and from Dionysius to Speusippus. Of the latter kind we have here an example (cf. also T 1, lines 12-16 and perhaps also *Epist. Socr.* XXXVI). The authors of such letters sometimes take their "information" from the biographical tradition (reliable and unreliable); but often they make up the charges and anecdotes which are later taken as facts by new "biographers" (cf. on T 1, line 8 *supra*). On the charges concerning Lastheneia and on Speusippus' φιλαργυρία cf. on T 1, lines 11-16 *supra*. The anecdote mentioned at the end of T 39a, however, that Speusippus, after paying himself the debts of Hermeias, tried to collect contributions to reimburse himself, is known from no source other than the "Dionysian" letters, cf. also *Epist. socr.* XXXVI. Coming as it does from this source it is at the very least highly suspect.

T 40

Cf. on T 1, lines 21-25 and 22-25 *supra*.

T 41

The "*quendam*" implies that Tertullian did not know who Speusippus was. But there is certainly no reason to follow J. P.

Waltzing, *Tertullien, Apologétique*. Commentaire analytique, grammatical et historique (Paris, 1931), p. 291, who suggests that Tertullian has perhaps confused Speusippus with another philosopher. We must note the words "*de Platonis schola*," which Tertullian must have taken from his source. Nor is Waltzing (*Tertullien, Apologétique*. Texte établi et traduit [Paris, 1929], p. 96) right when he translates "*in adulterio perisse*" as "fut tué en flagrant délit d'adultère," since the expression means "he perished while committing adultery." On the several versions about Speusippus' death cf. on T 1, lines 21-25, 21, and 22-25 *supra*.

T 42

Cf. on T 1, lines 67-69 *supra*.

T 43

Cf. comm. on F 4 *infra*.

T 44

Cf. comm. on F 28, lines 2-4 and 4-5.

T 45a-c

In these passages Simplicius informs us that Aristotle, Speusippus, Xenocrates, Heraclides, Hestiaeus, and others attended Plato's lecture "On the Good,"²⁵ that they wrote down his enigmatic remarks verbatim, and that they published them. This information Simplicius got from Porphyry's commentary on Plato's *Philebus*, where Porphyry discussed this lecture of Plato's in connection with that dialogue. What Porphyry reported about Speusippus, Xenocrates, Heraclides, and Hestiaeus *vis-à-vis* Plato's lecture in all probability he got from Dercyllides' work on Plato's philosophy, which was also his source for his knowledge of Hermodorus (cf. Simplicius, *Phys.*, pp. 247, 31-34 and 256, 31-34; Cherniss, *Riddle*, p. 90, n. 57). Since works with the title Περὶ τῶν ἀγαθῶν are attested for Aristotle (cf. Cherniss, *op. cit.*, pp. 12 and 90, n. 60; *AJP* 68 [1947], p. 236, n. 76 = *Selected Papers*, p. 187), Xenocrates (Diog. Laert. IV, 13 [I, p. 171, 4]), and Heraclides (Diog. Laert. V, 87 [I, p. 243, 11]), we must infer from Simplicius' wording in T 45a-c that

²⁵ Cf. Aristoxenus, *Elem. Harmon.* II, 30-31 (on the authority of Aristotle) and Riginos, *Platonica*, pp. 124-126 with references.

Speusippus too published his report on Plato's lecture, more probably than not under the title *Περὶ τὰγαθοῦ*. But even if this work had a different title, it is unjustified to contend, as Krämer, *Ursprung*, p. 212 does, that no writing *περὶ τὰγαθοῦ* is attested for Speusippus. That this treatise is not mentioned in the catalogue of his writings, is an additional indication that that list is not complete (cf. on T 1, lines 35-65).

We know nothing about the contents of Speusippus' report about Plato's lecture "On the Good." For we cannot accept at its face value Simplicius' statement in T 45a that, like Aristotle, also Speusippus, Xenocrates, and the others assigned to Plato the One and the Indefinite Dyad as principles. To begin with, neither Porphyry nor Simplicius had direct access to Aristotle's own *Περὶ τὰγαθοῦ*, but for their knowledge of this work they depended upon Alexander (cf. Cherniss, I, n. 77 and pp. 165-169; *AJP* 68 [1947], pp. 240-245 = *Selected Papers*, pp. 191-196). Secondly, it is noteworthy that in T 45a Simplicius, citing Alexander's report about Aristotle's *Περὶ τὰγαθοῦ*, ascribes to Plato the Indefinite Dyad, but says that Plato called it *μέγα καὶ μικρόν*, while Alexander himself cites the *Περὶ τὰγαθοῦ* for the principles the One and the Dyad (*In Metaph.*, p. 56, 33-35). Thirdly, Alexander's statements concerning Plato's "material principle" are not always consistent with one another²⁸ and sometimes run counter to Aristotle's testimony in the *Metaphysics* (cf. Cherniss, I, pp. 166-169). And it appears from Alexander's report (cf. *In Metaph.*, pp. 55, 20-56, 35) that, if Aristotle ascribed the Indefinite Dyad to Plato, this was an inference of his rather than Plato's own words. Fourthly, it is more probable than not that "Indefinite Dyad" as *terminus technicus* for the "material principle" was introduced by Xenocrates, who tried to read this doctrine into Plato in order to defend the latter against some of Aristotle's criticisms (cf. Cherniss, I, pp. 85-88 and 479-483; against Burkert, *Lore and Science*, p. 21, n. 28, who thinks that Plato's use of "Indefinite Dyad" has now been established by the fragment of Speusippus extant in the Latin translation of Proclus' *In Parmenidem*, cf. comm. on F 48). Finally, and most important

²⁸ For example, Alexander, *In Metaph.*, p. 85, 15-18 cites Aristotle's *Περὶ τὰγαθοῦ* for the principles One and Indefinite Dyad. Yet he there refers to Aristotle, *Metaphysics* 987 B 26 and 33, 988 A 13 where we find "Dyad," and he himself in his commentary on *Metaphysics* 987 B 33 ff. cited the *Περὶ τὰγαθοῦ* for the principles One and Dyad (cf. *In Metaph.*, p. 56, 34-35).

for our purpose here, Simplicius' knowledge of Aristotle's *Περὶ τἀγαθοῦ* came from Alexander and Porphyry, and Porphyry himself derived his knowledge of this work from Alexander. But Simplicius is indebted to Porphyry for his knowledge that Speusippus, Xenocrates and others attended Plato's lecture "On the Good" and wrote down and published Plato's enigmatic remarks on the subject; and Porphyry probably got this information from Dercyllides, certainly not from Alexander. Simplicius himself provides evidence that his knowledge of Aristotle's *Περὶ τἀγαθοῦ* comes from Porphyry (cf. T 45b-c) and from Alexander (cf. Simplicius, *In Phys.*, pp. 151, 6-8 = T 45a, and 454, 19-455, 11 with Alexander, *In Metaph.*, pp. 55, 20-56, 35). And so his statement in T 45a to the effect that also Speusippus, Xenocrates and "the others" ascribed to Plato the One and the Indefinite Dyad is in all probability merely an inference of his, as even his own words suggest that it is: cf. *λάβοι δ' ἔν τις καὶ παρὰ Σπευσίππου . . . , οἱ παρεγένοντο ἐν τῇ Περὶ τἀγαθοῦ Πλάτωνος ἀκροάσει· πάντες γὰρ συνέγραψαν κτλ.*

T 46

We may infer from this passage that Speusippus must have written a *Symposium*, another work which is not mentioned in the catalogue of his writings (cf. on T 1, lines 35-65 *supra*). On this text cf. also on F 1 *infra*. On the "symposia" allegedly offered by Plato and Speusippus cf. T 35 *supra* with note *ad loc.* See also the following note.

T 47

The beginning of this sentence shows it to be an extract (cf. Gulick's note [*Athenaeus*, vol. I, p. 15, n. a] and on F 28, 1 *infra*). Schweighäuser (cf. also Gulick, *Athenaeus* II, p. 323, n. a) proposed to read συμποτικούς for βασιλικούς on the basis of Athenaeus 186 B (I, p. 405, 10-12): τοῦ γοῦν Ξενοκράτους ἐν Ἀκαδημείᾳ καὶ πάλιν Ἀριστοτέλους (frag. 167 [Rose]) συμποτικοὶ τινες ἦσαν νόμοι. But βασιλικοὶ νόμοι means "rules or customs established by the 'king' of a symposium," cf. T. Bergk, *Fünf Abhandlungen zur Gesch. d. griech. Philos. und Astron.* (Leipzig, 1883), p. 67, n. 1; Kaibel's note on I, 3 F; Lang, p. 49. On βασιλεύς = συμποσιάρχος, cf. Plutarch, *Quaest. Conviv.* I, 4, 622 A and Lucian, *Saturnalia* 4. (Plato calls the wardens of the sympotic laws στρατηγοί, cf. *Laws* 671 D 5-7; in *Symposium* 213 E 9-10, Alcibiades refers to the ἄρχων τῆς πόσεως.) Speusippus

may have dealt with the βασιλικοὶ νόμοι in his *Symposium* (cf. T 46 *supra*) or may have written a special work on them.

T 48

Whether the letter, allegedly by Speusippus, cited here by Carystius of Pergamum (*FHG* IV, pp. 356-357) is the same as *Epist. Socr.* XXX or not, I believe it is spurious. On this and related questions cf. my *Pseudo-Speusippean Letters*.

T 49

This passage gives Porphyry's third main reason to explain the disappearance of early Pythagoreanism, namely, that Plato, Aristotle, Speusippus, Aristoxenus, and Xenocrates, while on the one hand they appropriated with slight changes the most important Pythagorean doctrines, on the other collected some superficial and unimportant notions and put them down as specific ideas of the Pythagorean school. And these latter doctrines are then used by those who slander that school. Porphyry says that this accusation of plagiarism comes from the Pythagoreans themselves. Though he does not tell us their names, the context shows that they must have been later Pythagoreans who claimed for the early members of the school the chief doctrines of the Platonists and of Aristotle. So far as Speusippus is concerned, he probably read some of his own doctrines into the early Pythagoreans—or at any rate tried to find a precedent for them in that school. It is noteworthy, however, that his doctrines are more often than not incompatible or essentially at variance with some of the basic tenets of early Pythagoreanism (cf. p. 109 *supra*). On this passage of Porphyry cf. also Burkert, *Lore and Science*, pp. 95 and 175.

COMMENTARY ON FRAGMENTA

F 1a-b

There is really only one independent source for the story of Plato's miraculous birth as told by Speusippus: this is either Diogenes Laertius III, 2, if as Lang thought Jerome depends on him, or as Bickel argued a source ultimately common to both. Even if the latter is the case, however, it is Diogenes who reproduces that source more accurately, as we shall see.¹

The story as we have it in F 1a seems to imply that at the time of Plato's conception Perictione was still a virgin, for otherwise there is no reasonable explanation of the words *ώραίαν οὔσαν τὴν Περικτιόνην* and *καθαρὰν γάμου φυλάξαι ἕως τῆς ἀποκνήσεως*. The context shows that *ώραία* here means "seasonable or ripe for a thing" (cf. LSJ, s.v. *ώραῖος* III) and that the genitive to be understood with it is *γάμου*. It is clear that at the time to which the story refers Ariston was the legal husband of Perictione, and we may conjecture that the situation envisaged was such as could easily have arisen out of an *ἐγγύη*: Ariston was the legal husband, and the time had come when he wished to consummate the marriage, Perictione then being of an appropriate age to have sexual relations.² He tried to make violent love to her³ but did not succeed. When he stopped his forcible attempt, he saw a vision of Apollo,⁴ and so he left Perictione free of the marital tie until she gave birth to Plato. The implication is that Apollo was Plato's real father. If Perictione had had sexual relations with Ariston before the time of Plato's conception, the whole point of the story would be lost.

If these are the implications, however, the anecdote told by

¹ Cf. p. 233 f. and notes 23 and 24 *infra*.

² On the *ἐγγύη* and on *γάμος* (= sexual intercourse) cf. Harrison, *The Law of Athens. The Family and Property* (Oxford, 1968), pp. 1-9.

³ *βιάζεσθαι* is a conative imperfect and, hence, Hicks' translation, "made violent love to Perictione," is inaccurate.

⁴ The words *ἰδεῖν* (sc. *τὸν Ἀρίστωνα*) *τὴν τοῦ Ἀπόλλωνος ὄψιν* need not mean, and can hardly mean, more than that, though some translators, e.g. Hicks and Gigante, assume that they refer to a vision in a dream. It is *other* ancient authors who mention a dream in narrating Plato's alleged miraculous birth (e.g. Plutarch, *Quaest. Conviv.* VIII, 717 D-E), but then these writers do not refer to Speusippus at all.

Speusippus contradicts the evidence we have that not Plato but Adeimantus was the oldest son of Ariston and Perictione. That evidence is provided by Plato himself when in the *Apology* (33 C-34 A) he has Socrates say that, if he had corrupted the youth, then Adeimantus, being Plato's brother (and standing therefore *in loco parentis*, as the context shows), would now have come to complain against Socrates, whereas Adeimantus, like others in a similar position, has come to help him.⁵ Hence, unless the anecdote narrated by Speusippus has somehow been distorted by later writers (but there is no evidence of this), we must infer that he told a story that was current in Athens (n.b. ὥς 'Αθήνησιν ἦν λόγος), but that he himself could not have attached any credibility to it. For it is highly improbable that Speusippus, who was Plato's nephew, who claimed to know about Plato's early life from documents or information belonging to the family (cf. F 2 with comm. *ad loc.*), and who certainly must have been acquainted with the *Apology*, could have believed not only in the absurdity of Plato's divine parentage but even that he was the oldest son of Ariston and Perictione. The incompatibility of this story with the historical evidence and the fact that Speusippus told it as one which was current in Athens are decisive reasons to reject the attempts that have been made to ascribe to Speusippus the intention of deifying Plato.⁶

⁵ Cf. Burnet's note on *Apology* 34 A 1. On this whole question and on the implication of *Republic* 368 A also, cf. Burnet, *Greek Philosophy*, pp. 206-207 and Davies, *Ath. Prop. Fam.*, pp. 332-333, both of whom point out that in all probability Glaucon, too, was older than Plato.

⁶ That Speusippus, like Plato, may have applied the adjective θεῖος to human beings (cf. note 25 *infra*) is a different thing from believing that Plato was actually the son of a god. Among those who think that Speusippus' intention was to make of Plato a divine being in the latter sense cf. Stenzel, cols. 1667, 32-1668, 2, Isnardi Parente, p. 869, and especially Boyancé, *Le culte des Muses*², pp. 257-267 who attempts to trace back to Speusippus all the ancient passages that refer to Plato's alleged miraculous birth. This is a highly improbable hypothesis, however, in view of the fact that, with the exception of Diogenes, Jerome, and perhaps the authors they cite (i.e. Clearchus and Anaxilides), no other ancient author refers to Speusippus. Moreover, the story as each of these other authors tells it is not parallel to the version given by Speusippus (cf. the reference to Riginos in p. 234 *infra*). (In support of his interpretation Boyancé, *op. cit.*, p. 255 asserts that for Speusippus three is "le premier nombre proprement dit," whereas Speusippus not only considered, as also Plato and Aristotle did, that two is a number, but even gave a specific argument to show that *one* is the first number [cf. on F 28, lines 18-22 *infra*].)

On the other hand, there is no reason why the story of Plato's miraculous

Almost all the discussion of this fragment in the scholarly literature has been concerned with the question of the precise title of Speusippus' work. According to Diogenes Laertius the story was told in Speusippus' *Funeral Banquet of Plato*, in Clearchus' *Encomium of Plato*, and in the second book of Anaxilides' *On Philosophers*. K. F. Hermann, *Gesch. u. Syst. d. Platon. Philos.*, p. 97, n. 45, Lang, pp. 32-38, and others, however, have argued that in the text of Diogenes Laertius the titles of Speusippus' and Clearchus' books have been reversed. Their arguments are: (a) in the list of Speusippus' works Diogenes Laertius mentions an Ἐγκώμιον Πλάτωνος (T 1, line 58), not a Περίδειπνον; (b) it is unlikely that Clearchus the Peripatetic wrote an *Encomium of Plato*,⁷ as there is no evidence that the early Peripatetics wrote real biographies, and as these philosophers were hostile to the Academy; (c) it is anachronistic to ascribe a Περίδειπνον to Speusippus, whereas *Encomia* are attested for his time. To begin with the question of Clearchus, there is no reason why he could not have written an *Encomium of Plato*.⁸ That as a Peripatetic he should have been hostile to the Academy is an unwarranted *cliché*. Nor is the fact that Aristoxenus' *Life of Plato*⁹ contained an attack against him (Lang, p. 33, n. 3) anything to the point, since Aristoxenus was not an "orthodox" member of the Peripatos, and neither was Clearchus whom the Peripatos even seems to have sought to disown.¹⁰ Secondly, to claim that it is

birth could not have circulated in Athens even during Plato's lifetime, nor why Speusippus could not have reported it, without himself believing it, in order to emphasize the high esteem in which Plato was held. Hence, Steinhart's scepticism (*Platons Leben*, p. 260, n. 17) about Speusippus' having told the anecdote is not justified.

⁷ This was already the contention of Schuch, *JfP* 2 (1831), pp. 24-25 who ascribes the *Encomium of Plato* to Clearchus of Heraclea, an implausible supposition, since that Clearchus died in 353/2 B.C., and it is hardly likely that such an *Encomium* could have been written during Plato's own lifetime. (On Clearchus of Heraclea cf. Lenschau, "Klearchos (4)," *RE* XI [1921], cols. 577, 67-579, 9.)

⁸ According to Olympiodorus, *In Platonis Gorgiam*, pp. 214, 25-215, 2 (Westerink) = frag. 650 (Rose), Aristotle wrote an *Encomium of Plato* which also contained a *Life*. Zeller, II, 2, p. 57, n. 2 rejects this testimony, however, because no other ancient author seems to have used Aristotle as a source for Plato's life. Cf. also Düring, *Aristotle Biogr. Trad.*, pp. 316-317.

⁹ Cf. Aristoxenus, frags. 62-65, 67 (Wehrli).

¹⁰ Cf. Plutarch, *De Facie In Orbe Lunae* 920 F (= Clearchus, frag. 97 [Wehrli]), with Bickel, *Diatribes in Senecae Philos. Frag.*, p. 134, note, Cherniss, *AJP* 70 (1949), pp. 417-418 = *Selected Papers*, pp. 445-446 and in his edition of the *De Facie*, p. 39 with notes *c* and *d*.

anachronistic to ascribe a *Περίδειπνον* to Speusippus, as Lang does citing to this effect Timon's 'Ἀρκεσιλάου περίδειπνον,¹¹ is to beg the question and to neglect the fact that funeral banquets were as traditional in Greek life and poetry as were encomia. Moreover, what is to be gained by ascribing a *Περίδειπνον* Πλάτωνος to Clearchus? If he wrote such a work, it must have been favorable to Plato all the same.¹² Finally, the fact that the *Περίδειπνον* Πλάτωνος is not found in the list of Speusippus' writings may be explained by the incompleteness, or by another defect, of that catalogue (cf. on T 1, lines 35-65).¹³ It is possible that Speusippus wrote both an *Encomium* and a *Funeral Banquet* of Plato¹⁴ or that the two are titles of one and the same work.¹⁵ Nor can it be excluded that a

¹¹ Cf. Diogenes Laertius IX, 115 with Diels, *Poet. Philos. Frag.* 9 B 73 and Wachsmuth, *Sill. Gr. Reliq.*², pp. 29-30. Note that the description of Timon's work, <ἐν> τῷ ἐπιγραφόμενῳ 'Ἀρκεσιλάου περιδείπνῳ, is formally the same as that given in III, 2 of Speusippus' work.

¹² Since the purpose of the speech or speeches (cf. note 15 *infra*) at the funeral banquet was to praise the dead. Cf. also Bickel, *op. cit.* in note 10 *supra*.

¹³ At any rate, the argument that the title in a catalogue is more likely to be authentic than that by which a work is cited in an ancient author is not always valid (cf. on T 1, lines 35-65 *supra*). The more so in this case, since Diogenes Laertius says "Speusippus in his work entitled *Funeral Banquet of Plato*." Lang, p. 34 rejects Mekler's attempt to reconstruct *Acad. Index Hercul.*, col. VI, 12 by combining it with two isolated fragments of Pap. Hercul. 164 (cf. Mekler, pp. XVI-XVII and esp. XXII, n. 1). But Pap. Hercul. 164 contains the same work as Pap. Hercul. 1021 (cf. the introductory note to T 2 *supra*), and Crönert, *Kolotes und Menedemus*, pp. 183-184, after reexamining the latter papyrus, reconstructs the text with which we are here concerned (col. VI, 12 ff.) as follows: Τιμό]λαος· Ξαλλιγένη[ς | 'Αθ]ηναῖος· [Τι]μό]λαος | [τοῦ]ς ἐν τῷ π[ε]ρί]δείπνῳ | [ἐ]στιάσας, ὡς ἰσ]τορεῖ Σπεύ[σι]ππος· κτλ. If this reconstruction is correct, we would have to infer that Speusippus described the funeral banquet of Plato (where Timolaus acted as host) and that his work was in all likelihood known as *Περίδειπνον* Πλάτωνος. This reconstruction, however, cannot be considered certain because Pap. Hercul. 164 has not yet been transcribed (cf. introd. note on T 2 *supra*).

¹⁴ This is the tentative suggestion of Menagius, and the opinion of Hirzel, *Der Dialog*, I, p. 345, n. 5.

¹⁵ So Jonsius, *De Script. Historiae Philos.*, p. 56, Luzac, *Lect. Att.*, p. 142, n. 13, Grote, *Plato*, I, p. 246, n. 2, and Mullach, *Frag. Philos. Graec.*, III, p. 68b and n. 105 think that Speusippus wrote one work on Plato but that it was known by two different titles. Fischer, p. 38 and n. 124 believes that the same work was published twice under two different titles; but of this there is no evidence.

Martin, *Symposion*, pp. 162-166 also believes in one work only, and that the title Πλάτωνος ἐγκώμιον is to be explained by the fact that the *Περίδειπνον* was an encomium of the dead. He goes further than that, however, and contends that the *Περίδειπνον* was truly an ἐπιτάφιος, that it had no relation-

part of the *Encomium* was a funeral banquet and that this part was called by Speusippus himself *Περὶ δειπνῶν Πλάτωνος*, or came later to be called so (n.b. that Diogenes Laertius specifically says "in the work entitled *Funeral Banquet of Plato*").

There is therefore no reason to think that anything is wrong in the text of Diogenes Laertius III, 2. And, since also Jerome (F 1b) ascribes an *Encomium* of Plato to Clearchus, we must infer that this is what he read either in his text of Diogenes Laertius or in that of his source.¹⁶

If Speusippus wrote a *Funeral Banquet* or if his *Encomium* formally was, in whole or in part, a "funeral banquet," then the work or that part of it which was a *περὶ δειπνῶν* may well have been some kind of "symposium,"¹⁷ though Lang is right, I believe, in denying that Plutarch, *Quaest. Conviv.* I, 612 D-E (= T 46) is

ship at all with symposia or *δειπνά*, and that it contained one speech only, in this case Speusippus' on Plato. But Martin's inferences are not supported even by the texts he himself cites, Theon, *Progymnasmata* 8 (p. 109, 22-24 [Spengel]) and Demosthenes, *De Corona* 288: the *περὶ δειπνῶν* is not identical with the *ἐπιτάφιος*, nor does Theon say that it is; and τὸ *περὶ δειπνῶν* in Demosthenes means merely "the funeral feast." It is possible that Martin is right in believing that in the *Περὶ δειπνῶν* there was only one speech, but he is almost certainly wrong in contending that the *Περὶ δειπνῶν* had no connection with *δειπνά*, as even the name indicates that it does.

¹⁶ Lang, pp. 33-34 argues that the alleged mistake in the text of Diogenes Laertius "*non recentioris, sed iam veteris librarii negligentia ortum esse*." There is, however, no plausible palaeographical reason for such a mistake, and the other arguments advanced by Lang are far from compelling. He assumes, moreover, that Jerome is dependent upon Diogenes Laertius, a hypothesis vigorously denied by Bickel, *Diatriba in Senecae Philos. Frag.*, pp. 133-139, who contends that Jerome's source was Porphyry, that the ultimate source of both Porphyry and Diogenes was Thrasyllus, and that according to Jerome the title of Speusippus' and Clearchus' respective works was *Πλάτωνος ἐγκώμιον* (so already Menagius), and that *Περὶ δειπνῶν* in Diogenes is a later addition to the tradition. Now there is no way of ascertaining whether Jerome's source was Diogenes, Porphyry, or some other author unknown to us, nor is there any evidence that Thrasyllus is ultimately the source on which Diogenes and Jerome depend; but Bickel is almost certainly wrong in his contention that Jerome ascribes also to Speusippus a *Πλάτωνος ἐγκώμιον*, for the words "*Speusippus quoque sororis Platonis filius et Clearchus in laude Platonis et Anaxilides in secundo libro philosophiae*" imply that an encomium of Plato is ascribed to Clearchus only. The only reasonable inference is that either Jerome suppressed the reference to the title of Speusippus' work or that he did not find it in his source. On Jerome's unreliability cf. note 23 *infra*.

¹⁷ Cf. note 15 *supra*, second paragraph.

evidence that the *Funeral Banquet* was a "symposium."¹⁸ The title of the work or of a part of it, if it is to that that Περὶ Δειπνον refers, and the fact that Speusippus wrote dialogues (cf. on T 1, lines 35-65) suffice, however, to admit the possibility that the work may have been a "symposium," though it is also possible that there was in it one speech only, that by Speusippus himself.¹⁹

Who was Diogenes Laertius' immediate source? It is highly improbable that he himself read Speusippus, Clearchus, and Anaxilides. His source may have been Anaxilides,²⁰ who is mentioned last and whose work "On Philosophers" may well have been of a "historical" nature, or a source unknown to us that cited the three above mentioned authors who spoke of Plato's miraculous birth. Without accepting *in toto* the theory that Diogenes purposely concealed his immediate source, there is no question that he sometimes withholds from us such information.²¹ Unfortunately, Jerome, who also cites Speusippus, Clearchus, and Anaxilides, cannot help us to settle this question, since he himself may depend on Diogenes Laertius. If he does not, the probability is that an author unknown to us, the ultimate source of both Diogenes and Jerome, cited Speusippus, Clearchus, and Anaxilides.²²

As for Jerome's report of Plato's miraculous birth, it is clear that he has abbreviated his source and has made explicit what is implied in Diogenes' more detailed and accurate report, namely, that Plato was born while Perictione was still a virgin and that Apollo was Plato's real father. But when he says "*Perictionem . . . fasmate Apollinis oppressam*," it appears that he has wrongly transferred

¹⁸ To such use was the passage of Plutarch put by Schmidt, *Didymi Chalcenteri Gramm. Alex. Frag.*, p. 368 and by Hirzel, *Der Dialog*, I, p. 345, n. 5.

¹⁹ As Martin would have it, cf. note 15 *supra*.

²⁰ The evidence of the manuscripts of Diogenes Laertius and of Jerome show that this is the correct form of the name, and it was adopted by the Basle editors of book III of Diogenes Laertius. This Anaxilides is otherwise unknown, but there is no reason to identify him with the Anaxilaus mentioned by Diogenes in I, 107 and with Anaxilaus of Larissa, as did Schwartz, s.v. "Anaxilaides," *RE* I (1894), col. 2083, followed by Wehrli, *Klearchos*, p. 46. Cf. Tarán, *Dict. of Sc. Biogr.* I, p. 150.

²¹ For example, in III, 57 Diogenes cites Favorinus for the contention that Plato found almost the whole of the *Republic* in the 'Αντιλογικοῖς of Protagoras, though it is clear from III, 37 that the ultimate source of this story was Aristoxenus. If we had only III, 37 we would not know that Diogenes' immediate source was Favorinus.

²² Cf. note 16 *supra*.

Ariston's attempt to make violent love to Perictione to the vision of Apollo himself.²³

Apuleius, who probably did not have direct access to Speusippus' work, or works, on Plato (cf. on F 2), also mentions Plato's miraculous birth in his *De Platone* I, 1. It is uncertain, however, whether in this connection he was ultimately dependent on Speusippus, for the story as Apuleius tells it is very much abbreviated and in one important detail at variance with the version that Diogenes Laertius ascribes to Speusippus.²⁴ On the several other authors who refer to the stock motif of Plato's miraculous birth without mention of Speusippus, Clearchus, and Anaxilides cf. Riginos, *Platonica*, pp. 9-15, who provides also an analysis of the evidence. It is noteworthy that according to Origen, *Contra Celsum* VI, 8 the story of Plato's miraculous birth was told by Aristander (the soothsayer of Alexander the Great) καὶ ἄλλοι δὲ πλείονες τῶν Πλατωνικῶν ἐν τῷ Πλάτωνος βίῳ and that, besides Speusippus', works on Plato are attested for Philip of Opus (Test. I [Tarán]), Xenocrates (frag. 53 [Heinze]),

²³ That Diogenes is our best source for the story of Plato's alleged miraculous birth as told by Speusippus is clear, even if Jerome does not depend on him. For Diogenes' detailed report can hardly be a reelaboration of the version of the story found in Jerome (cf. note 24 *infra*). Note also that Jerome either did not know or has suppressed the title of Speusippus' work (cf. note 16 *supra*), that he wrongly renders 'Αναξιλίδης ἐν τῷ δευτέρῳ Περὶ φιλοσόφων as "*Anaxilides in secundo libro philosophiae*," and that he has suppressed all reference to the fact that Speusippus told the story as one which was current in Athens. In general on Jerome's unreliability cf. Courcelle, *Les lettres grecques en occident*², pp. 47 ff., Hagendahl, *Latin Fathers and the Classics* (Göteborg, 1958), esp. pp. 150 ff. and 298 ff., Gigon, *GGA* 217 (1965), pp. 119-122.

²⁴ Apuleius says: "*sunt qui Platonem augustiore conceptu prosatum dicant, cum quidem Apollinis figuratio Perictionae se miscuisset*" (p. 82, 7-9 [Thomas]), but the *figuratio Apollinis* is not found in Diogenes Laertius, just as there is no mention there, either, of Apollo's having had sexual intercourse with Perictione. It is tempting to think that when Jerome says "*Perictionem . . . fasmate Apollinis oppressam*" he too refers to the *figuratio* of Apollo having had sexual intercourse with Perictione. But the probability seems to be that Jerome either misunderstood his source or that he purposely transferred to Apollo Ariston's attempt to make violent love to Perictione in order to downgrade Plato's alleged miraculous birth. Apuleius' version may be an inference (of his own or of his source), and may well come from an author who was not immediately dependent on Speusippus' version. At any rate it is intelligible that the ἔψις of Apollo that appeared to Ariston according to Diogenes Laertius became the *figuratio* or the *fasma* of Apollo which had sexual intercourse with Perictione rather than that the latter version could have given origin to Diogenes' account (cf. also note 23 *supra*).

Hermodorus, Erastos, and Asclepiades (cf. *Acad. Index Hercul.*, col. VI, 6-12 [pp. 34-35, Mekler]). On the stock motif of parthenogenesis in antiquity cf. Usener, *Das Weinachtsfest*², pp. 71-83, Fehrle, *Die kultische Keuschheit*, pp. 3 ff., Bieler, *Theios Aner*, I, pp. 24 ff. (Further on this fragment cf. on F 1-2 *infra*.)

F 2

We may conjecture that Apuleius' reference to Speusippus' report on Plato's childhood, adolescence, and manhood ultimately comes from the latter's *Funeral Banquet* or from his *Encomium*, unless the two titles refer to the same work (cf. on F 1a-b). It is unlikely that Apuleius had direct access to Speusippus' work, however, since his biography of Plato is probably dependent on an earlier *Life* which itself was put together from several different sources. Moreover, if Speusippus' work had been available to Apuleius, one would have expected to find more than this single reference to it in the *De Platone*.

In the first chapter of this work, Apuleius emphasizes the extraordinary nature of Plato's ancestry, birth, and childhood. In chapter two he cites Speusippus in order to support his contention that Plato "*verum etiam aequiperavit divum potestatibus*." We should not infer, however, that this was also Speusippus' intention, because Apuleius does not say so. And what he ascribes to Speusippus does not imply supernatural attributes, though Speusippus, like Plato himself, may have believed that men who possess such extraordinary gifts are "divine."²⁵ In this connection we must keep in mind that Speusippus probably did not attach any credibility to the story of Plato's miraculous birth (cf. on F 1a-b) and that Apuleius himself reports the story of Plato's divine parentage as the opinion of some writers (cf. *De Platone* I, 1 [p. 82, 7-9, Thomas]: *sunt qui . . . dicant . . .*) and does not ascribe it to Speusippus at all.

It is noteworthy that for his information on Plato's childhood and adolescence Speusippus is said to have relied on the family's records or information (*Speusippus domesticis documentis instructus*), whereas his report on Plato's manhood was probably based on his own experience (*et in viro harum incrementa virtutum et ceterarum con-*

²⁵ Cf. e.g. Plato, *Laws* 951 B 4-5 εἰσὶ γὰρ ἐν τοῖς πολλοῖς ἄνθρωποι ἀεὶ θεῖοι τινες — οὐ πολλοί, *Republic* 383 C 3-4, 469 A 4-5, 500 C 9-D 1, etc. and Speusippus F 57 with comm. *ad loc.*

venisse testatur). Speusippus' description of Plato's virtues is in agreement with the qualities Plato himself ascribes to the "philosophic nature." Those mentioned here by Apuleius are all of an intellectual character. Cf. Plato, *Republic* 486 B-487 A, 503 C-E, 535 B-D, *Theaetetus* 144 A-B, etc.

F 1-2

In support of his notion that Speusippus' work on Plato was entitled *Encomium*, not *Funeral Banquet* (cf. on F 1a-b), Lang, pp. 35-38 contends that Speusippus was influenced by Isocrates' *Euagoras*. He compares F 1a with *Euagoras* 21 and F 2 with *Euagoras* 22-23. But even if Lang were right about the question of Isocratean influence, his inference concerning the title would not follow; for even a *Funeral Banquet* would have contained praise of Plato and might therefore have been influenced by Isocrates. In fact, however, the parallels cited by Lang are not so striking as necessarily to support the alleged influence of Isocrates on Speusippus. To begin with, in F 1a Speusippus told a specific story about Plato's divine parentage, a story that was current in Athens and which he himself could not have believed to be true (cf. on F 1a-b). Isocrates for his part reports nothing similar about Euagoras' birth. What is more, he specifically states that he will not go into such stories; not because he does not believe them to be true, but because he wishes to discuss what is known to all, not merely to a few of Euagoras' fellow citizens (cf. *Euagoras* 21). If a precedent to the story of Plato's miraculous birth is to be cited, it need not be this passage of Isocrates at all but rather the stories about the divine parentage of Greek heroes, which we find already in Homer.²⁶ Moreover, the contents of F 2 correspond more closely to Plato's

²⁶ The story which Iamblichus, *Vit. Pyth.* 2, 7 (p. 7, 20-26 [Deubner]) ascribes to Epimenides, Eudoxus (= frag. 324 [Lasserre]), and Xenocrates (= frag. 22 [Heinze]), to the effect that Pythagoras was Apollo's son, is said by some scholars, e.g. by Lasserre, *Eudoxos*, p. 264, to be early. It is surely incompatible, however, with the belief in metempsychosis, which was an early Pythagorean tenet (cf. Burkert, *Lore and Science*, pp. 120 ff.). It is therefore highly improbable that the story about Pythagoras can go back to Epimenides, and we must suppose that Eudoxus and/or Xenocrates cited him to lend credibility to their "reports." What Speusippus said about Plato's alleged miraculous birth (cf. F 1a-b) was a story current in Athens, and it is quite likely that Eudoxus (who survived Plato, cf. Tarán, *AJP* 87 [1966], p. 469 and n. 8) and Xenocrates modelled the story about Apollo and Pythagoras on that of Speusippus' about Plato.

own description of the qualities of the philosophic nature than to what Isocrates says about Euagoras. He ascribes to him in his childhood *κάλλος*, *ῥώμη*, and *σωφροσύνη*, whereas according to Apuleius Speusippus praised the child Plato for the keenness of his intellect and his marvelous memory, and stated that in adolescence Plato was remarkable for his devotion to work and his love of study. Euagoras' *σοφία* and *σωφροσύνη* are the Isocratean, not the Platonic virtues which Speusippus ascribes to Plato (cf. on F 2 *supra*, and n.b. Plato, *Republic* 487 A 3-5, 503 C 2, 535 C 1-2). In short, the differences between Speusippus' and Isocrates' respective attitudes towards Plato and Euagoras are more significant than the similarities alleged by Lang.

F 3

Though Diogenes Laertius states that this notice concerning Parmenides as legislator of Elea comes from Speusippus' *περὶ φιλοσόφων*, it is uncertain in which work of his this statement occurred, since the words quoted above may refer to content and need not stand for a title at all. Menagius, however, tentatively followed by Long, took *Περὶ φιλοσόφων* to be a title and proposed an emendation in order to get it into the list of Speusippus' works (cf. on T 1, line 40). Zeller, p. 1006, n. 3 says that we do not know whether or not *Περὶ φιλοσόφων* and *Φιλόσοφος* (T 1, 43) are the same work, whereas Lang, pp. 41-42 and 51 with n. 1 believes that they are, and considers this text to be a fragment of the *Φιλόσοφος*. Even if the words *περὶ φιλοσόφων* refer to content, however, this text need not come from the *Φιλόσοφος*; it could be a fragment of the *Περὶ φιλοσοφίας* (T 1, line 40)²⁷ or of another work of Speusippus. If on the other hand *Περὶ φιλοσόφων* is a title, it is missing from the catalogue of Speusippus' works (cf. on T 1, lines 35-65).

This information about Parmenides is repeated, without any indication of source, by Strabo VI, 1, c. 252 and by Plutarch, *Adv.*

²⁷ There is evidence that in his *Περὶ φιλοσοφίας* Aristotle discussed his predecessors (cf. *De Philosophia*, frags. 3, 6, 9, 26 [Rose]), and Speusippus may have done so too in his homonymous work. (Lang appears to think that *περὶ φιλοσόφων* cannot be a title because in Speusippus' time the members of the Academy did not concern themselves with the history of philosophy. But even in Plato's own dialogues there is evidence of an interest in, and of definite views about, the history of early Greek philosophy. And there is no reason why Speusippus could not have written a work entitled "On Philosophers" with some kind of "historical" discussion of early philosophy.)

Colotem 1126 A-B. (The latter also tells the story about the citizens' oath at the beginning of each year to abide by the Parmenidean laws.) It has been conjectured that the source of this notice is either Timaeus of Tauromenium (Burnet, *Early Greek Philosophy*⁴, pp. 171, n. 2 and 311; Kirk and Raven, *Presocratic Philosophers*, p. 265) or Democritus (Gigon, *Sokrates* [Bern, 1947], p. 220; Untersteiner, *Parmenide* [Firenze, 1958], p. 21). Against the former hypothesis one may say that there is no evidence that Timaeus discussed Parmenides, and in any case Speusippus could hardly have been dependent on him, since chronology makes that almost impossible. The latter suggestion is in itself unlikely and based moreover on an unnecessary emendation of Plutarch's text.²⁸ Since Speusippus is the earliest author cited for Parmenides' activity as legislator, it is possible that Plutarch and Strabo are ultimately dependent on him through several intermediate sources.²⁹ One of them may have been Dicaearchus, who played an important rôle in the creation of the *topos* of the early philosophers as legislators and practical men.³⁰

No evidence supports Jaeger's contention that Speusippus' motivation in reporting Parmenides' rôle as lawgiver of Elea was to find a precedent to Plato's alleged similar attempts in Sicily. In fact, since already in Plato himself we find the *topos* of the early philosophers as legislators and practical men,³¹ it is possible that Speusip-

²⁸ It has been asserted that in Plutarch the statement about Parmenides is preceded by a citation of Democritus (*FVS* 68 B 157) that exhorts to political activity as a source of glory. But in *Adv. Colotem* 1126 A there is no reason to emend the MSS' reading, *πολεμικήν*, to *πολιτικήν*, the conjecture of Reiske adopted by Pohlenz in his edition (p. 212, 8), by Diels-Kranz (*FVS* II, p. 175, 5), and by others. Against this emendation cf. R. Philippson, *Phil. Woch.* 46 (1926), col. 1100 f.; Q. Cataudella, *Maia* 2 (1949), pp. 268-273; R. Westman, *Plutarch gegen Kolotes*, pp. 263-265 and in his appendix to Pohlenz's edition (Leipzig, 1959²), p. 239. P. De Lacy and B. Einarson print the reading of the MSS without comment.

Even if the emendation were correct, however, the reference to Democritus which precedes the statement about Parmenides would not justify the ascription of that statement to Democritus.

²⁹ The texts of Strabo and of Plutarch are not close parallels, and so there is no reason to think that they have an immediate common source. The respective contexts are quite different, and Strabo states that Parmenides and Zeno were Pythagoreans, whereas Plutarch does not do so.

³⁰ Cf. Dicaearchus, frags. 25-46 (Wehrli) and Jaeger, *Scripta Minora*, I, pp. 378 ff., esp. 383, n. 1 = Aristotle², pp. 450 ff., 454, n. 1.

³¹ Cf. esp. *Republic* 599 C-600 B with the references in Shorey's notes on this passage (*Rep.* II, pp. 436-438).

pus was influenced by him. It is impossible to ascertain whether or not Speusippus had a source for his statement about Parmenides and, even if he had, whether there is some truth in it ³² or not. At any rate, it seems that like Plato Speusippus was of the opinion that the wise man is the only true king and legislator (cf. F 4 with comm. *ad loc.*).

It is unlikely that Diogenes had direct access to Speusippus, nor do we know who was his immediate source. Since Favorinus, however, is often Diogenes' source, and since he is mentioned by Diogenes immediately after the present text, he is a possibility, though perhaps no more than that.

F 4

This fragment, to all appearances a verbatim quotation, is said by Stenzel, col. 1668, 6 to be clad in Stoic terminology, and L. Delatte, *Rev. d'Hist. de la philos.* N.S. 6 (1938), pp. 168-170 has even proposed to read Chrysippus for Speusippus.³³ His arguments are: (a) the *Πρὸς Κλεοφῶντα* is not found in the list of Speusippus' writings (T 1, lines 35-65); (b) the doctrine of this fragment is not particularly Speusippean and is elsewhere attributed to the Stoics.³⁴ But, though Delatte is right in contending against Lang's proposal to emend *Πρὸς Κέφαλον* (T 1, line 44) to *Πρὸς Κλεοφῶντα* that the former work was in one book whereas Clement's *ἐν τῷ Πρὸς Κλεοφῶντα πρώτῳ* implies that the latter had at least two books,³⁵ the emendation he proposes is not only unnecessary but highly improbable, since the alleged mistake would have to be ascribed to

³² For some scholars who think so cf. Untersteiner, *op. cit.*, pp. 21-22 with references.

³³ M. Gigante, *Nomos Basileus* (Napoli, 1956), p. 108 and n. 2, apparently without knowledge of Delatte's article, tentatively suggests the same emendation. M. Isnardi Parente, herself without referring to Delatte, was at one time rather in sympathy with Gigante's proposal (cf. *PP* 24 [1969], p. 204, n. 2), though in her "up-dating" of Zeller's work (pp. 929 and 930) she rejects the emendation without giving specific arguments.

³⁴ Cf. e.g. *SVF*, III, Nrs. 328, 613-622.

³⁵ This objection to Lang's proposal Stenzel, col. 1668, 10-17 had already made, and so Delatte's statement "Stenzel n'apporte pas à cette question une autre réponse que celle de Lang" (*op. cit.*, p. 169) is not justified. A similar objection, even apart from the total lack of evidence to support them, meets the suggestions of Zeller, II, i, p. 1006, n. 3, who identifies the *Πρὸς Κλεοφῶντα* with the *Περὶ νομοθεσίας* (T 1, line 60), and of Hirzel, *Der Dialog*, I, p. 314, n. 2, who thinks that the *Πρὸς Κλεοφῶντα* is the same work as the *Mandrobulus* (T 1, line 62 and F 5a).

Clement himself or to his source, as Delatte himself recognizes.³⁶

To begin with, the title in question is nowhere ascribed to Chrysippus. And if the list of his writings in Diogenes Laertius is not complete,³⁷ the same thing is to be said, though for different reasons, of that of Speusippus (cf. on T 1, lines 35-65). Moreover, whereas no evidence connects Chrysippus with any man called Cleophon, we know that Speusippus made the Athenian demagogue of that name or another Cleophon a character in his *Mandrobulus* (cf. this note *infra* and also on F 5a). Finally, nothing in this fragment is incompatible with Speusippus' authorship. Thus, the conception of νόμος as λόγος ὁρθός seems to be peculiarly Stoic.³⁸ Since Plato himself, however, speaks of νόμος as embodying a λόγος which it calls ὁρθός (cf. *Laws* 659 D 2-3 πρὸς τὸν ὑπὸ τοῦ νόμου λόγον ὁρθὸν εἰρημέ- νον), there is nothing strange or implausible in Speusippus' assumption here that νόμος is an ὁρθός λόγος. The passage of Plato's *Laws* cited above supports the contention that such a notion as that of Speusippus' may be independent of the peculiarly Stoic conception of λόγος.³⁹ Nor does the fact that σπουδαῖος is here predicated twice necessarily imply Stoic authorship either, as Delatte thinks that it does.⁴⁰ Finally, the notion that the wise man is the only true ruler and legislator is also Platonic, as the *Republic* and the *Laws*, not less than the references in the *Politicus* to the "royal art" show.⁴¹

³⁶ This is to be inferred from Clement's own words after his citation of Speusippus: ἀ καὶ ἔστιν· τούτοις ἀκόλουθα οἱ Στωικοὶ φιλόσοφοι δογματίζουσιν, κατλ. (*Stromata*, vol. II, p. 123, 2-3).

³⁷ The list of Chrysippus' works is incomplete because of a lacuna in the MSS of Diogenes Laertius after VII, 202 (II, p. 392, 3).

³⁸ On ὁρθός λόγος in the Stoics cf. Pearson, *The Fragments of Zeno and Cleanthes* (London, 1891), pp. 8-9 and 9, n. 3, *SVF*, IV, p. 93, A. A. Long (ed.), *Problems in Stoicism* (London, 1971), where see in the *Index* ὁρθός λόγος (p. 251) and *ratio (recta)* (p. 253).

³⁹ On some uses of ὁρθός λόγος in Plato cf. Dirlmeier, *Aristoteles, Nikomachische Ethik*, pp. 298 ff. On Aristotle's use of it in the *Nicom. Ethics* cf. the discussion in Greenwood, *Aristotle, Nicomachean Ethics Book Six* (Cambridge, 1909), pp. 167-168, and Dirlmeier, *op. cit.*, pp. 440-441 and 472-473. Of special interest is *Eth. Nic.* 1144 B 21-30, a passage where the commentators (cf. e.g. Burnet and Gauthier-Jolif *ad loc.*) rightly see an allusion to the Academy and which is therefore presumptive evidence for the use of ὁρθός λόγος by Speusippus and Xenocrates in connection with moral virtue.

⁴⁰ On νόμος σπουδαῖος cf. Aristotle, *Eth. Nic.* 1152 A 21, *Politics* 1325 A 2-3. On νομοθέτης σπουδαῖος cf. *Politics* 1297 B 38 and 1325 A 8.

⁴¹ Cf. Plato, *Politicus* 259 A-B and 292 E. Cf. also ἡ βασιλικὴ τέχνη in *Euthydemus* 291 B ff. See [Plato], *Minos* 317 C 3-7, where n.b. τὸ μὲν ὁρθὸν νόμος ἐστὶ βασιλικός, τὸ δὲ μὴ ὁρθὸν οὐ, δ δοκεῖ νόμος εἶναι τοῖς μὴ εἰδόσιν. But there is in the *Minos* nothing peculiarly Speusippean.

This fragment implies that if kingship is something *σπουδαῖος*, and if the wise man is the only king and ruler, then the law, since it is a right rule, and since it comes from the wise man, also is *σπουδαῖος*. It is impossible to determine the context of this statement. The suggestion of Zeller, II, i, p. 1010 and n. 2 that Speusippus was trying to refute the Cynics' contempt for civic law while accepting their premise that the wise man is the only king and ruler, is possible but no more than that.⁴² The statement made in this fragment may have occurred in a dialogue or in a treatise where Speusippus had already proved the thesis embodied in the protasis (cf. *εἰ γὰρ κτλ.*), without any connection with the Cynics.

There is no evidence to decide whether *Πρὸς Κλεοφῶντα* here means "To Cleophon," as Bywater, pp. 28-29 maintains, or "Against Cleophon," as Hirzel, *Der Dialog*, I, p. 314, n. 2 would have it (cf. Susemihl, *Bursians Jahresber.* 34 [1883], p. 18). The same thing may be said about Bywater's and Hirzel's differing views about the identity of this Cleophon: the latter maintains that he is the Athenian demagogue, whereas the former holds that he may be the poet criticized by Aristotle in the *Rhetoric* and in the *Poetics*.⁴³ Nor can it be ascertained whether this Cleophon is the same as the Cleophon who is a character in Speusippus' *Mandrobulus* (cf. F 5), as both Bywater and Hirzel from their respective points of view maintain that he is. But it is more probable than not that, *pace* Hirzel, the *Πρὸς Κλεοφῶντα* and the *Mandrobulus* are *not* the same work.⁴⁴

⁴² There is no evidence about the alleged polemical intent of Speusippus' statement, and the notion that the wise man is the only ruler is not expressly attributed to the early Cynics in our sources. H. Henkel, *Studien zur Gesch. d. griech. Lehre vom Staat* (Leipzig, 1872), p. 18, however, wrongly objects to Zeller that for the Cynics the law is something *ἀστέιον*, for the passage he cites in support of his objection, when read in its entirety, actually implies that the law which is *ἀστέιον* is that of the cosmos. Cf. Diogenes Laertius VI, 72 (II, p. 278, 15-20): *περὶ τε τοῦ νόμου ὅτι χωρὶς αὐτοῦ οὐχ οἶόν τε πολιτεῦσθαι· οὐ γὰρ φησιν (sc. Diogenes) ἄνευ πόλεως ὄφελός τι εἶναι ἀστέιου· ἀστέιον δὲ ἡ πόλις· νόμου δὲ ἄνευ πόλεως οὐδὲν ὄφελος· ἀστέιον ἄρα ὁ νόμος· εὐγενείας δὲ καὶ δόξας καὶ τὰ τοιαῦτα πάντα διέπαιζε, προκοσμήματα κακίας εἶναι λέγων· μόνην τε ὁρθὴν πολιτείαν εἶναι τὴν ἐν κόσμῳ.*

⁴³ On the identity of the "Cleophons" mentioned by Aristotle, cf. Bywater, *op. cit.*, pp. 17-30. The fact that the Athenian demagogue of that name died in 404 B.C. should not be used as an argument to the effect that he is not the Cleophon of the *Πρὸς Κλεοφῶντα* (so Bywater, *op. cit.*, p. 30 and Lang, p. 41); this begs the question, since Bywater merely supposes that the title of Speusippus' book means "To Cleophon."

⁴⁴ Cf. note 35 *supra*.

It is noteworthy that Clement himself says that this text of Speusippus stands in close relation to Plato's *Euthydemus* and *Politicus*, to the pseudo-Platonic *Minos*, and to the Stoics (cf. *Stromata* II, 4, 18, 2-19, 4); and so it is possible that he found these texts in a doxographical source. But even if he did not, there is no evidence that he had direct access to Speusippus. (For another citation of Speusippus by Clement cf. F 77.)

F 5a

All interpretations of Aristotle, *Soph. Elench.* 174 B 27 (ὁὶον ὁ Κλεοφῶν ποιεῖ ἐν τῷ Μανδροβούλῳ) previous to that of Bywater, because they took the clause to mean that Cleophon was the author of the *Mandrobulus*,⁴⁵ have been superseded by his article "The Cleophons in Aristotle,"⁴⁶ a paper still neglected by many scholars.⁴⁷ Comparing *Soph. Elench.* 174 B 27 with other passages where Aristotle refers to statements by, or procedures of, characters in Plato's dialogues,⁴⁸ Bywater has shown that ὁ Κλεοφῶν here designates a character in a dialogue entitled *Mandrobulus*. This interpretation is also in accord with "Fitzgerald's canon," which is

⁴⁵ Cf. e.g. F. G. Welcker, *Die Griechischen Tragödien* (Bonn, 1841), p. 1013; A. Nauck, *Trag. Graec. Frag.*², p. 962; Bonitz, *Index Aristotelicus* 393 B 52-57; Von Leutsch, *Corpus Paroem. Graec.*, II, p. 115, note; Cope, *The Rhetoric of Aristotle*, III, p. 73; Dindorf, in Stephanus' *Thes. Ling. Graec.*, s.v. Μανδροβούλος; F. Susemihl, *Aristoteles über die Dichtung*² (Leipzig, 1874), p. 219. The two authors mentioned last were the first to say in modern times that the *Mandrobulus* was a dialogue. But they did this merely because of the anonymous paraphrast (cf. on F 5b), and they still took Cleophon to be the author of the work. (The anonymous paraphrasis on the *Soph. Elench.* was first published by Spengel in 1842.)

⁴⁶ *JP* 12 (1883), pp. 17-30, esp. 21-30.

⁴⁷ Cf. Diehl, s.v. "Kleophon (2)," *RE* XI (1921), col. 796, who states that the tragic poet Cleophon is the author of the *Mandrobulus*. Similarly Kroll, *RE* XIV (1928), col. 1040, 2-5; W. Schmid, *Gesch. d. griech. Lit.*, I, iii, p. 843, n. 10 (who refers to Rostagni's note on Aristotle, *Poetics* 1448 A 12, though Rostagni there accepts Bywater's interpretation of *Soph. Elench.* 174 B 27), *Kleine Pauly*, III, col. 251, s.v. "Kleophon (2)," and even A. W. Pickard-Cambridge, *Oxford Class. Dict.*², p. 252, s.v. "Cleophon (2)," who had himself accepted Bywater's interpretation in his translation of the *Soph. Elench.* (cf. his note on 174 B 27, in vol. I of the Oxford translation of Aristotle's works). The passage, however, has been correctly interpreted by B. Snell, *Trag. Graec. Frag.*, I (Gottingen, 1971), p. 247, Nr. 77 T 5 with the corresponding note.

⁴⁸ Cf. Bywater, *op. cit.*, pp. 23-24 with F. Ueberweg, *Unters. über d. Echth. u. Zeitfolge plat. Schr.* (Wien, 1861), pp. 140-142.

generally valid.⁴⁹ Since a work entitled *Mandrobulus* appears in the list of his writings (T 1, line 62), since Speusippus did write dialogues (cf. on T 1, lines 35-65), and since the logical procedure ascribed by Aristotle to Cleophon is in agreement with Speusippus' interests in method (cf. *infra*), we may infer with good probability that in *Soph. Elench.* 174 B 27 Aristotle refers to Cleophon's rôle in Speusippus' dialogue *Mandrobulus*.⁵⁰

From Aristotle we can also infer that in the *Mandrobulus*—or at any rate in that part of it Aristotle has in mind here—Cleophon, while questioning somebody, was drawing distinctions in order to indicate in which one of two possible senses he wished his questions to be taken. And he did this in order to forestall the possibility that the respondent should give an answer which holds against one way of interpreting the question but not against the other. From the context we must also infer that Cleophon was trying to avoid being refuted by the respondent's answer. It is noteworthy that the words Aristotle uses (ποιεῖσι διττόν) and what is intended by them here (i.e. to avoid the fallacy of homonymy) are in accord with Speusippus' division of words and with his classification of fallacies (cf. F 68a-c and F 69a-b). No less remarkable is the fact that Aristotle should cite here the *Mandrobulus* and not one of Plato's dialogues. This is perhaps an indication that he considered what Cleophon did in the *Mandrobulus* to be more typical of the questioner's procedure than anything found in the Platonic dialogues.⁵¹

We know nothing else about the *Mandrobulus*. For it is uncertain whether the title was meant to indicate a connection between the

⁴⁹ On "Fitzgerald's canon" and against A. E. Taylor's attempt to deny its validity (*Varia Socratica*, pp. 40-51), cf. Ross, *Aristotle's Metaphysics*, I, pp. xxxix-xli.

⁵⁰ There is no need, however, to follow Bywater in his view about the catalogue of Speusippus' writings (cf. on T 1, lines 35-65). That the *Mandrobulus* was a dialogue is to be inferred from the way Aristotle refers to it.

⁵¹ The text of Aristotle does not support Hirzel's notion (*Der Dialog*, I, p. 314 and n. 3) that in the *Mandrobulus* it was Socrates who refuted Cleophon, particularly in view of the fact that Cleophon is said to have been the questioner, not the respondent. Nor is it possible, *pace* Hirzel, to infer that Socrates was a character merely because the anonymous paraphrast calls the *Mandrobulus* a "Platonic dialogue." This may be mere guess on the part of the anonymous (cf. on F 5b). In any case, not even in Plato is Socrates always one of the main speakers (cf. e.g. the *Sophist* and the *Timaeus*), and in the *Laws* he is not a character at all.

work and the proverb ἐπὶ τὰ Μανδροβούλου χωρεῖ τὸ πρᾶγμα.⁵² Nor do we know the identity of the Cleophon who was a character in this dialogue.⁵³

F 5b

The anonymous seems merely to be paraphrasing the text of Aristotle. It is therefore necessary to determine the meaning of his description of the *Mandrobulus* as a Πλατωνικὸς διάλογος. Bywater maintains that the paraphrast took the *Mandrobulus* to be a dialogue of Plato's, as is shown by the way he refers to Plato's *Gorgias*.⁵⁴ He argues moreover that this can hardly be a blunder, since the Byzantine writer correctly interpreted the phrase "as Cleophon does in the *Mandrobulus*;" that therefore the paraphrast is probably dependent on an earlier source, and that at some point in the tradition Speusippus' work came to be ascribed to Plato. As Bywater himself admits, however, Πλατωνικὸς διάλογος can also mean "a dialogue in the Platonic manner," and it is possible that the paraphrast or his source has used the expression in this sense, without any intention of ascribing the dialogue to Plato. Hence, to have called the *Mandrobulus* a "Platonic dialogue" may have been a mere guess prompted by Aristotle's own previous reference to the *Gorgias* (*Soph. Elench.* 173 A 7-8). And the paraphrast's way of referring to the *Gorgias* would explain why he takes Cleophon to be a character in the *Mandrobulus*, if indeed he does so.⁵⁵ If, as Bywater maintains, to confuse Speusippus with Plato is unlikely for a Byzantine writer to whom Plato's works must have been available, this confusion is at least as improbable for any one else in earlier times.

⁵² On this proverb cf. Von Leutsch-Schneidewin, *Corpus Paroem. Graec.*, I, p. 77; Von Leutsch, *ibid.*, II, pp. 114-115 with *Scholia in Lucianum*, p. 167, 12-17 (Rabe). Though he refuses to speculate, Bywater (*op. cit.*, p. 29) says: "I can easily imagine the story becoming the text for a very pretty logomachy, in which one of the parties might be represented as showing himself a wary disputant 'as Cleophon did in the *Mandrobulus*.'" If the work was related to the proverb, however, the probability is that for one of the disputants the discussion went from bad to worse. This character may, but need not, have been Cleophon.

⁵³ Cf. on F 4 with note 43 *supra*.

⁵⁴ Cf. Anon., *In Soph. Elench.*, p. 35, 13-14 (Hayduck): ὅπερ ὁ Καλλικλῆς ἐν τῷ Γοργίᾳ γέγραπται ποιῶν τῷ Πλατωνικῷ διαλόγῳ, whereas Aristotle says (*Soph. Elench.* 173 A 7-8): ὥσπερ καὶ ὁ Καλλικλῆς ἐν τῷ Γοργίᾳ γέγραπται λέγων. Cf. further Bywater, *op. cit.*, pp. 25-26.

⁵⁵ Cf. the previous note.

The only other published Greek commentary on the *Soph. Elench.*, the so-called pseudo-Alexander, who may be Michael Ephesius or Psellus,⁵⁶ is of no help concerning this question, since in his comment on 174 B 19-27⁵⁷ he refers to Plato's *Gorgias* and to the first book of the *Republic* and does not mention the *Mandrobulus* at all.

The following may be said about the possible identity of the anonymous paraphrast and of that of his source. In his edition of the anonymous, Hayduck⁵⁸ follows V. Rose⁵⁹ in thinking that this work is so similar to Sophonias' paraphrasis of Aristotle's *De Anima*⁶⁰ that Sophonias is probably the author of the anonymous paraphrasis on *Soph. Elench.* also. In support of this conjecture Hayduck cites some unusual expressions and rare forms of words used by Sophonias which occur also in the anonymous.⁶¹ If this is so, since it has been established that in his paraphrasis of the *De Anima* Sophonias quotes large portions of Philoponus' commentary,⁶² it is quite possible that Philoponus or some other member of the Neoplatonic school of Alexandria is the source of the anonymous work on the *Soph. Elench.* And it is noteworthy that, whereas in LMN the paraphrasis is anonymous, in P it is said that some ascribe it to Simplicius and others to Philoponus. The scholarly habits of the Alexandrian school, however, do not lend authority to the paraphrast's description of the *Mandrobulus* as a "Platonic dialogue."⁶³

F 6

Since the passage about τὸ σίον (marshwort) occurs in the midst of a discussion of mushrooms, Kaibel (crit. app. *ad loc.*) thinks this

⁵⁶ Cf. Wallies, *CAG* II, 3, p. v with notes 2-5.

⁵⁷ Cf. *CAG* II, 3, pp. 115-118 (Wallies).

⁵⁸ *CAG* XXIII, 4, p. v.

⁵⁹ *Hermes* 2 (1867), p. 210.

⁶⁰ *CAG* XXIII, 1.

⁶¹ Cf. Hayduck, *CAG* XXIII, 4, p. v, n. 2.

⁶² Cf. S. Van Riet, *Rev. Philos. de Louvain* 63 (1965), pp. 5-40 and G. Verbeke, *Jean Philopon. Commentaire sur le De Anima d'Aristote* (Louvain, 1966), pp. CIV-CV.

⁶³ In the extant commentaries of the Neoplatonic school of Alexandria there are numerous cases of false ascriptions of works, of passages attributed to the wrong work, etc. These and similar mistakes are due to the fact that these commentaries are almost always based on lectures. Cf. Westerink, *Anonymous Prolegomena to Platonic Philosophy*, pp. IX ff. and Tarán, *Asclepius on Nicomachus*, pp. 12-13, 14-15 with references.

passage (vol. I, pp. 143, 23-144, 2) was interpolated here from some other place in Athenaeus. Even if this is so, there is no reason to doubt the authenticity of this text and what it tells us about Speusippus.

This passage is important for several reasons: (a) it is the only fragment of the "Ομοια where natural habitat is mentioned, and natural habitat was one of the criteria Speusippus used in his classification of plants and animals (cf. Aristotle, *De Partibus Anim.* 642 B 10-13 and on F 67 *infra*); (b) it is the only fragment of the "Ομοια where a description of a plant or animal is given; (c) in this description the marshwort is associated with the celery because their leaves are alike (cf. Theophrastus, *Hist. Plant.* 9, 11, 10: ἔχει δὲ αὕτη [sc. ἡ λιβανωτίς] τὸ μὲν φύλλον ἑοικὸς σελίνῳ ἐλείφει μείζον δὲ πολύ).

This is the only extant fragment of the "Ομοια where ἑοικὸς with the dative is used to express the relation of similarity (but cf. F 28, line 55: δυνάδι ἑοικέναι). Aristotle objected to natural habitat and to the unrestricted use of similarity as criteria of classification, cf. on F 17, F 6-27, and F 67 *infra*.

F 7

The use of πέπων as a noun is condemned by Phrynichus, *Ecl.* 226 (Fischer) = 230 (Rutherford), and it does not seem to have any Attic classical authority behind it.

F 8

Lang, pp. 11-14 and 58, note, after comparing this fragment with several passages of Aristotle's *Historia Animalium* (esp. with 523 B 9 ff., 527 B 35 ff., 528 A 6 ff., and 528 B 17 ff.), ascribes to Speusippus the same classification of the ὀστρακόδερμα as he thinks Aristotle has (that is, κοχλῆαι, ὀστρεα, the latter itself being divided into bivalves and univalves) and, because of this, emends the first κόγχους to κόχλους. Besides the fact that the emendation Lang proposes is unwarranted, his interpretation is highly improbable. To begin with, some of these names (e.g. κόχλοι and ὀστρεα) are both generic and specific, and even in the case of Aristotle, whose work we have, we cannot always be sure exactly how he uses them, as Lang himself admits. Secondly, Aristotle places the land snails in one class with the sea snails, whereas Speusippus' classification was based on natural habitat (cf. on F 6), and Aristotle criticized

it on this account for dividing homogeneous classes (cf. *De Part. Animal.* 642 B 10-20 and on F 67 *infra*). Finally, the word κόγχους provides the link between the two passages that constitute this fragment, which in Athenaeus are separated from each other by a quotation from Sophocles about the στράβηλοι. We must note Athenaeus' words: παραπλήσια εἶναι κήρυκας, . . . , κόγχους . . . ἔτι ὁ Σπεύσιππος ἐξῆς πάλιν ἰδίᾳ καταριθμεῖται κόγχους κτλ. It is hardly likely that by the underlined words Athenaeus meant to say that the first four kinds of animals were placed by Speusippus in a class different from the five which follow καταριθμεῖται. It is rather more probable that he meant that the latter are παραπλήσια to (i.e. resemble) the first four. If this is so, we must infer that Athenaeus repeated κόγχους at the beginning of the second enumeration in order to indicate the connection with the first four kinds and that the eight kinds were placed by Speusippus within a single higher class. The division into a different class comes only with the words καὶ ἐν ἄλλῳ μέρει, and in this higher class only the ὄστρεον and the λεπὰς are included. *

Since all the animals mentioned in this fragment are testaceans, and since the class *μυλακχόστρακα* is attested for Speusippus (cf. F 9), it is possible that he also singled out the ὄστρακόδερμα as a class, and that he is here dividing that class into two groups or sub-classes on the basis of the similarity to each other, within each group, of the different kinds mentioned in this fragment. It is therefore more probable than not that with κόγχαι and with ὄστρεα he meant to designate species, not higher classes or genera. By the former he may have meant the mussel or cockle (cf. LSJ, s.v. κόγχη) and by the latter the oyster.

The word παραπλήσια used here to designate the relation of similarity or resemblance between several species occurs also in F 9, 12a and b, 18, 20, and 23. For a similar usage in Plato, cf. e.g. *Protagoras* 349 D 2-5: ἀλλ' ἐγώ σοι . . . λέγω . . . ὅτι ταῦτα πάντα μόρια μὲν ἐστὶν ἀρετῆς, καὶ τὰ μὲν τέτταρα αὐτῶν ἐπιεικῶς παραπλήσια ἀλλήλοις ἐστίν, ἡ δὲ ἀνδρεία πάνυ πολὺ διαφέρειν πάντων τούτων (cf. also 359 A 7-B 1). For Aristotle's use of παραπλήσια cf. on F 9. The use of μέρος in this fragment to designate a higher class may also go back to Speusippus. This fragment provides evidence that, besides enumerating the *δμοια*, and besides grouping them together within a higher class because of their similarities, Speusippus in the *Ὅμοια* also divided the classes because of their differences. On the im-

portance of the principles of ὁμοιότης and of πότερον ταῦτὸν ἢ ἕτερον in Speusippus cf. pp. esp. 53-77 *supra*.

On the several names which occur in this fragment, several of which are ambiguous, cf. Thompson, *Glossary of Greek Fishes*, pp. 113-114 (κῆρυξ), 209-218 (πορφύρα), 251-252 (στράβηλος), 118-119 (λόγχη), 133-134 (κτέν or κτεῖς), 200-202 (πίννη), 257-258 (σωλήν), 190-192 (ὄστρεον), 147-148 (λεπάς).

F 9

In this fragment Speusippus is saying that of the μαλακόστρακα the κάραβος, ἄστακος, νύμφη, ἄρκτος, καρκίνος, and πάγουρος are similar to one another. We must therefore infer that he is giving us here one of the divisions of the crustacea and that all the six classes are infimae species within the μαλακόστρακα, though καρκίνος is frequently used as a generic name (cf. Aristotle, *Hist. Animal.* 525 A 34 ff., Thompson, *Glossary of Greek Fishes*, p. 105). There is no question then that Speusippus not only grouped together similar animals but that he also classified them into higher and lower classes. *Pace* Lang, however, we cannot infer that the μαλακόστρακα is a class within the bloodless animals, because the implication of *De Partibus Animal.* 642 B 15-16 (= F 67) is that sanguineous-bloodless was not used as a criterion of division in Speusippus' classification. The animals mentioned here occur also in Aristotle, except the νύμφη, which is otherwise unknown, and which seems to occur only here in extant Greek literature. On παραπλήσια cf. on F 8 *supra*; we may note that Aristotle himself uses the word in referring to the similarity between the γένος τῶν καράβων and τὸ τῶν καλουμένων ἄστακῶν (cf. *Hist. Animal.* 525 A 31). On the six kinds of fishes mentioned in F 9 cf. Thompson, *op. cit.*, pp. 17-18, 18-19, 102-103, 105-106, 177, 193.

F 10

This fragment is also fatal to Lang's attempt to foist on Speusippus Aristotle's classification of animals, as he himself tacitly admits (cf. Lang, p. 14); for, even apart from the fact that Aristotle does not mention the κερκώπη at all, for him the τέττιξ is a genus (cf. *De Part. Animal.* 682 A 18 and 24-25) of which the τιτιγόσιον is a species (cf. *Hist. Animal.* 556 A 14-20). For Speusippus, however, comparison with other fragments of the "Ὅμοια where animals or plants are grouped together because of their similarity to each other

(cf. e.g. F 6, 8, 9) permits us to infer that the *κερκώπη*, the *τέττιξ*, and the *τιτιγόνιον* (on which cf. LSJ, *s.vv.*) are three kinds of insects similar to one other that he placed within a higher class the name of which we do not know.

Kaibel's conjecture *δ<ευτέρω>* for the MSS' *δ* is probably right, since most of the fragments Athenaeus cites come from the second book of the *Ὅμοια*. For the form *τιτιγόνιον* cf. LSJ, *s.v.* and S. A. Naber, *Photii Patriarchae Lexicon*, II, p. 217 and n. 4 with references. *ῥμοιον* is probably Speusippus' own word; on *παριστάναι*, cf. *δυστάναι* in F 13 and comm. *ad loc.* On *κερκώπη* cf. Naber, *op. cit.*, I, p. 336 with n. 4.

F 11

This fragment has been preserved both by Photius and by Suidas. According to the former it comes from the second book of Speusippus' *ῥμοιότητα*, whereas the latter says from the twelfth. Photius must be right because Speusippus' work was in ten books (cf. T 1, line 54) and also because most of the fragments preserved by Athenaeus dealing with the classification of plants and animals come from the second book. (The mistake in Suidas is easy to explain: it originated in joining β with the ι of the preceding τῶι.) It is unlikely, however, that the title *ῥμοιότητα* is a variant preserved by the school tradition, as Stenzel, col. 1648, 33-36 believes it is, for it is highly improbable that the work was available to Photius, and the title Athenaeus cites is *Ὅμοια*, which is compatible with the title preserved in the catalogue of Speusippus' writings (cf. T 1, line 54).

From this fragment we may infer that Speusippus posited a relation of similarity between *πηγνίον*, *ἐμπίς*, and *κῶνωψ* (on which cf. LSJ, *s.vv.*), since the text begins with the assertion that *πηγνίον* is an animal similar to the *κῶνωψ* (an assertion that may ultimately go back to Speusippus himself), and since comparison with other fragments shows that the purpose of enumerating several kinds of animals (which is what is here specifically ascribed to Speusippus) was to point out their similarity to one another (cf. e.g. F 8 and 9). Hence, Speusippus could not have held that the *πηγνίον* is a species (*εἶδος*) of the *κῶνωψ*, as Photius, followed by Lang, thinks he did. Nor can we infer that in this context Speusippus used the word *εἶδος*; cf. Balme, *CQ* N.S. 12 (1962), p. 83, who, however, wrongly denies that Speusippus posited a generic or higher class within

which fall the insects mentioned here (cf. on F 6-27 *infra*). Pace Lang, p. 15, however, we cannot merely assume that that higher class in Speusippus was the same as Aristotle's *ἐντομα δίπτερα ἐμπροσθόκεντρα*. There is no evidence to that effect, and it is noteworthy that the notion that Aristotle himself placed the *ἐμπίς* and the *κώνωψ* within such a class is only a hypothesis of Aubert and Wimmer (cf. their *Aristoteles, Thierkunde*, I, p. 158). Even they, however, do not include the *πηγίον* in this class, though Aristotle mentions the *πηγίον* in *Hist. Animal.* 551 B 6.

F 12a-b-c

Aristotle (cf. frag. 313 [Rose] and Rose, *Aristoteles Pseudepigraphus*, p. 306) and Speusippus placed in one class, because of their similarities, the *φάγρος*, the *ἐρυθρίνος*, and the *ἥπατος*. From F 12b we learn that the fragment comes from the second book of the *Ὅμοια*. In F 12a and b we find *παραπλήσια*; in F 12c *ὅμοιον* with the dative: both expressions may go back to Speusippus himself, though this is not certain (cf. on F 13).

The *φάγρος* is a red fish, one of the Sea-Breams (cf. Thompson, *Glossary of Greek Fishes*, p. 273). The *ἐρυθρίνος* is a deep-sea fish (cf. Aristotle, *Hist. Animal.* 598 A 13), also red in color, but of uncertain identity (Thompson, *op. cit.*, p. 65). The *ἥπατος* cannot be identified at all (Thompson, *op. cit.*, p. 76).

F 13

If Athenaeus' report is trustworthy, Speusippus placed in different classes the *θυνίς* and the *θύννος* (on which cf. Thompson, *Glossary of Greek Fishes*, pp. 79 ff.). Since the former is the female fish, and since also Aristotle "distinguishes" between the two on the basis of sex, it is appropriate to quote the passage in Athenaeus which precedes F 13, i.e. Athenaeus VII, 303 C-D (II, p. 168, 18-23 [Kaibel]): *θυνίς. τοῦ ἄρρενος ταύτην φησὶ διαφέρειν ὁ Ἀριστοτέλης* (cf. *Hist. Animal.* 543 A 12) *τῷ ἔχειν ὑπὸ τῇ γαστρὶ πτερύγιον, ὃ καλεῖσθαι ἀθέρα. ἐν δὲ τῷ περὶ ζῶων μορίων* (sic! but cf. *Hist. Animal.* 543 B 11) *δυστάς αὐτὴν τοῦ θύννου φησὶν τοῦ θέρους τίκτειν περὶ τὸν ἑκατομβαιῶνα θυλακοειδές, ἐν ᾧ πολλὰ γίνεσθαι μικρὰ ᾧά.* Now in the second passage of Aristotle's to which Athenaeus refers, Aristotle is merely characterizing the way in which the *θυνίς* places her eggs and the time when she does. Hence the word *δυστάς*, employed by

Athenaeus but not by Aristotle, is unjustified, if he means by it more than the mere difference between male and female. For Aristotle, however, this difference cannot be a specific one. In the first passage to which Athenaeus refers, Aristotle does use the verb διαφέρειν in reference to the fact that the male differs from the female in that the latter has under the belly a fin known as ἀφαρέα (or ἀφορέα; Athenaeus has ἀθέρα, but the meaning of all these words is unknown). Yet even in this last case Aristotle could not have meant that the difference between the male and the female is a specific differentia. For all these reasons the word διστάναι that Athenaeus employs in the case of Speusippus is suspect, and we cannot be sure that Speusippus actually used it. Since for Speusippus, however, knowledge of anything presupposes knowledge of every difference from any other thing, and since he admitted essential and non-essential differences in his definitions (cf. pp. 58 ff. *supra*), it is possible that he differentiated the θυννίς from the θύννος on the basis of sex and that, whether or not he used the word διστάναι for this purpose, he “divided” the two into different kinds.

F 14

Since in this fragment the μελάνουρος and the κορακῖνος are said to be similar (ἐμπερής) to one another, and since in F 16 the ψύρος is said to be similar (ὅμοιος) to the μελάνουρος, we may infer that Speusippus may have used ἐμπερής and ὅμοιος synonymously, if indeed this terminology goes back to him (on ἐμπερής cf. also F 22). But we cannot be sure that the order Speusippus gave was μελάνουρος, κορακῖνος, ψύρος, as Lang, p. 8 thinks it was. On κορακῖνος, μελάνουρος, and ψύρος, cf. Thompson, *Glossary of Greek Fishes*, pp. 122-123, 159-160, 296.

F 15a-b

From these two texts, which occur in different places in Athenaeus, it is clear that his citations of Speusippus for a matter of usage reflect his own interests, not those of Speusippus (cf. also on F 7 and on F 20). On βῶξ, μαινίς, and σμαρίς cf. Thompson, *Glossary of Greek Fishes*, pp. 33, 153-156, and 247-248.

F 16

Cf. on F 14 *supra*.

F 17

Lang, p. 10 contends that the first kind of bloodless animals, τὰ μαλάκια, is divided by Aristotle (*Hist. Animal.* 523 B 22, 524 A 20-27) into two classes: the πολύποδες and a second class the name of which is not given, though its species are enumerated, namely, σπηΐαι, τευθίδες, τεῦθοι. And, in accordance with his tendency to foist Aristotle's classification on Speusippus, he asserts that we find both classes in Speusippus also, the πολύποδες in this fragment and the second class in F 21, where two of its species, the σπηΐα and the τευθίς are mentioned. Stenzel, col. 1640, 7-8 accepts Lang's interpretation and cites εἶδη πολυπόδων here as evidence of the fact that Speusippus classified animals according to genus and species (γένος and εἶδος). Balme, for his part (*CQ* N.S. 12 [1962], p. 83 and n. 2), in his eagerness to deny such a use of γένος and εἶδος to Speusippus, makes the same mistake as Lang and Stenzel, for he too assumes that Speusippus' classification is the same as that of Aristotle. He is right in calling attention to the fact that, though Athenaeus cites Aristotle and Speusippus for the εἶδη πολυπόδων, Aristotle does not speak of εἶδη but of γένη πολυπόδων (cf. *Hist. Animal.* 523 B 28-29, 525 A 13, 622 A 14-15, *De Part. Animal.* 685 B 12-13; n.b. the similar mistake when Athenaeus [frag. 347, Rose] speaks of εἶδη, whereas Aristotle [*Hist. Animal.* 544 B 1 and 593 A 15-16] has γένη). But Balme disregards the fact that Aristotle's and Speusippus' classifications are different and that their respective conceptions of the unity of definition and of essence are different, too.

We need not here go into the complicated question of Aristotle's own classification of animals. What must be mentioned is that in *De Part. Animal.* 642 B 16-20, where in all probability he is attacking Speusippus (cf. on F 67), Aristotle objects to Speusippus' use of non-essential characteristics such as natural habitat, because it disrupts homogeneous classes. To do so, Aristotle argues, shows that the application of the method of dichotomic diaeresis is useless for classification; for it breaks up a single, homogeneous class in as much as some πολύποδες are among the land animals while others are among the sea animals. Speusippus then must have posited the class πολύποδες. We cannot be sure, however, that Speusippus himself used the expression εἶδη πολυπόδων. But, even if he did, he could hardly have meant "species" in Aristotle's technical sense. Cf. pp. 61 ff. *supra*. On βολβιτίνη, ἐλεδώνη, ὀσμύλος, πολυποδίνη, cf. Thompson, *Glossary of Greek Fishes*, pp. 33, 61, 188-189, 204.

F 18

Thompson, *Glossary of Greek Fishes*, pp. 197, 278, and 284 criticizes Speusippus for mentioning together the *πέρκη*, the *χάννα*, and the *φυκίς*. He believes that *φυκίδα* is probably corrupt, for *έρυθρῖνον* would be the appropriate word, and that *πέρκη* seems hardly appropriate. Thompson (*op. cit.*, p. 197) makes a similar criticism of Aristotle, *Hist. Animal.* 538 A 20-21, where *ψῆττα*, *έρυθρῖνος*, and *χάννα* are brought together, and where Thompson would read *πέρκη* for *ψῆττα*. It seems to me that we should not emend the text, even though the criticism is valid. On *παραπλήσια* cf. on F 8 and on F 12a-b.

F 19

For *βελόνη* = the Garfish, cf. Thompson, *Glossary of Greek Fishes*, p. 31. But Thompson, *op. cit.*, p. 220 seems to think that Speusippus himself identified the *βελόνη* and the *ῥαφίς*, whereas this matter of usage in all probability goes back to Athenaeus only (or to his source), cf. on F 7 and on F 15a-b, and n.b. the mention of this fish in F 20.

F 20

On *βελόνη* cf. F 19. On *κέστρα* (= the spet), cf. Thompson, *Glossary of Greek Fishes*, p. 108. This is the Attic name. Thompson (*op. cit.*, p. 256) approves of Speusippus' comparing the first two fishes, but in view of the uncertain identity of the *σαυρίς* he proposes (*op. cit.*, pp. 229-230) to read *σφῦρα* or *σφυρίς* or *σφύραινα*.

F 21

Lang, pp. 10-11 contends that in Aristotle *σηπία*, *τευθίς*, and *τεῦθος* are three species of the second class into which *τὰ μαλάκια* are divided; and, since Speusippus here mentions the *σηπία* and the *τευθίς*, he infers that Speusippus' classification is the same as that of Aristotle. But even apart from Lang's mistaken view of F 17 (cf. *ad loc.*), he seems to be wrong concerning Aristotle, too. For in Aristotle the two principal kinds of *μαλάκια* are the *σηπία* and the *πολύποδες*; "τευθίς and τεῦθος, the Squids, are described by comparison with these" (Thompson, *Glossary of Greek Fishes*, p. 260; cf. Aristotle, *Hist. Animal.* 523 B 21 ff., 524 A 25 ff.), whereas according to this fragment the *σηπία* and the *τευθίς* (on which cf.

Thompson, *Glossary of Greek Fishes*, pp. 231-233 and 260-261) are ὅμοια, and so must be two different kinds of a higher class.

F 22

On ἐμπερής cf. on F 14. On κόκκυξ (a Gurnard or Piper), χελιδών (Flying Gurnard), and τρίγλη (Red Mullet), cf. Thompson, *Glossary of Greek Fishes*, pp. 119-120, 285-286, and 264-266, who seems to approve Speusippus' comparison.

F 23

Though ψῆττα (one of the Flatfishes; Sole or Flounder) seems to be the Attic word for βούγλωσσος, both Speusippus and Aristotle cite them as if they were two different but related kinds, cf. Thompson, *Glossary of Greek Fishes*, pp. 33-34 and 294. Of the ταινία little is known, cf. Thompson, *op. cit.*, p. 258. On παραπλήσια cf. on F 8 and on F 12a-c.

F 24

This fragment may be a verbatim quotation. On ῥαφανίς (radish) and on γογγυλίσ (turnip), cf. Theophrastus, *Hist. Plant.* 1, 2, 7 and 7, 4, 3. ῥάφους = French turnip (= βουνιάς). On ἀνάρρινον (= κάρδαμον = nose smart), cf. [Aristotle], *Probl.* 925 A 30.

F 25

On φασιανός (a Pheasant), cf. Thompson, *Glossary of Greek Birds*, pp. 298-300. On the question of usage cf. on F 7, on F 15a-b, and on F 19.

F 26

On σκῶψ (Little Horned Owl) cf. Thompson, *Glossary of Greek Birds*, pp. 262-264. According to Athenaeus, Homer, Speusippus, and Aristotle have κῶψ for σκῶψ, and Alexander of Myndus (in Athenaeus IX, 391 C) says the same of Homer and of Aristotle. Yet Aristotle in *Hist. Animal.* 617 B 31 has σκῶπες (cf. Gulick, *Athenaeus*, vol. IV, p. 269, n. h). It may be that later scribes emended the text of Aristotle. Be that as it may, the question of spelling goes back to Athenaeus, not to Speusippus, cf. on F 25.

F 27

The word συβώτας seems to occur in no other text. There is no reason to think, however, that it was a name given to Speusippus, as Menagius thought (cf. vol. I, p. 530, Huebner). Nor is it necessary

to emend it to τροφίας as Mullach, *Frag. Philos. Graec.* III, p. 73b proposed. Lang, p. 60, note is probably right in following Fischer, p. 50, who takes this text to mean that the word συμβώτας occurs in Speusippus and that it refers to some kind of living being. If this is so, this text probably belongs to the second book of the "Ὅμοια, which dealt with the classification of plants and animals (cf. on F 11). The slight change to συμβώτης (= swineherd) is tempting. In that case, however, the corruption is earlier than Hesychius, since he lists συμβώτης after συμβώτας and obviously does not know what the latter word means (cf. ζῶόν τι). The word συμβώτας is listed neither in LSJ nor in the latest supplement to it (1968).

F 6-27

The preceding twenty-two fragments are, at most, all that remains of Speusippus' "Ὅμοια, the work which in the catalogue of his writings is called ἡ περὶ τὰ ὅμοια πραγματεία (cf. on T 1, 54) and to which, among others, Aristotle probably refers as αἱ γεγραμμέναι διαίρεσεις (*De Part. Animal.* 642 B 12; cf. 643 A 36 and on F 67). Sixteen fragments are specifically said to come from the second book (on F 11 cf. comm. *ad loc.*). In F 10 Kaibel's emendation δ<ευτέρω> is almost certainly right, and F 19 probably comes from the second book, too, as F 20 shows. In F 7 only the title is mentioned; in F 21 and 22 neither the title nor the book is given. As these three texts, however, come from Athenaeus, who cites twenty of the twenty-two fragments and who says of most of them that they come from the second book of the "Ὅμοια, we can be reasonably certain that also F 7, 21, and 22 come from the same work and book. (On Hesychius' citation of F 27 cf. *ad loc.*) Athenaeus himself may be the ultimately source of F 11 and of F 27, since it is possible that Photius and Suidas, on the one hand, and Hesychius, on the other, may have taken their texts from a no longer extant part of his work. It is unlikely that Athenaeus himself read Speusippus, and we must suppose that he got the material he cites from the "Ὅμοια through one or more Hellenistic writers.⁶⁴

⁶⁴ Even in the case of Aristotle's biological works, which were known through the Hellenistic age and which he cites much more often than Speusippus' "On Similar Things," there are strong reasons for thinking that Athenaeus is indebted to several Hellenistic authors, cf. I. Düring, *Notes on the History of the Transmission of Aristotle's Writings* (GHA 56 [1950], nr. 3), pp. 40-57 and 61-64. In fact, Athenaeus' interest in the matter of spelling and usage, which we find in several fragments, suggests that he probably took some of his quotations from one or more lexicographers.

We may then infer that the second book of Speusippus' work "On Similar Things" was devoted to the classification of plants and animals. It appears from the fragments that he classified the natural kinds into higher, or more general, and lower, or less general, classes and that the principle used for grouping the kinds in classes was that of similarity (on the principle of *ὁμοιότης* in Speusippus cf. pp. 53 ff. *supra*). To express the relation of similarity Speusippus probably used the words *εἰκός*, *παραπλήσιον*, *ὅμοιον*, *ἐμπερής*, and *παριστάται*.⁶⁵ That he also divided the kinds into different classes is shown by frags. 8, 9, 13, and 17. (On *δυστάται* in F 13 cf. *ad loc.*) In dividing the classes Speusippus must have made use of the principle *πότερον ταῦτὸν ἢ ἕτερον* (on which cf. pp. 65 ff. *supra*). To express the relation of the lower to the higher class he seems to have used the word *μέρος* (cf. F 8). Two names of higher classes are attested: *μαλακόστρακα* (F 9) and *πολύποδες* (F 17), and Speusippus' use of *ὀστρακόδερμα* is probable enough (cf. on F 8). Undoubtedly, he must have used many other such names. Aristotle also posits the *μαλακόστρακα* and the *ὀστρακόδερμα* as single classes but he objects to Speusippus' unnatural division of the *πολύποδες* (cf. on F 17). For this and for several other reasons (cf. on F 6, 8, 9, 10, 11, 13, 17, 21) Lang's attempt to foist Aristotle's classification of animals on Speusippus must be rejected.

The interest in questions of spelling and usage found in some texts must be ascribed to Athenaeus and/or to his source or sources, not to Speusippus himself (cf. on F 7, 15a-b, 19, 25, and 26, and also note 64 *supra*).

One fragment provides evidence of the fact that natural habitat was one of the criteria used by Speusippus in classifying the natural kinds, and this is corroborated by the testimony of Aristotle (cf. F 6 with comm. *ad loc.*). This same fragment also provides evidence that Speusippus gave some kind of description of plants and animals, and it is therefore reasonable to infer that his work "On Similar Things" contained more than the bare enumerations of plants and animals extant in the fragments.⁶⁶ Some scholars (e.g.

⁶⁵ The recurrence of most of these words through the fragments suggests that they probably go back to Speusippus himself, even if in some cases they may be due to Athenaeus and/or his source.

⁶⁶ This is also made probable from consideration of Speusippus' logic and theory of knowledge; for he thought that knowledge of anything requires knowledge of all its differentiae from any other thing, and his classification of plants and animals was part of his exhaustive classification of all reality which he used for the purpose of definition (cf. pp. 64 ff. *supra*).

Lang, pp. 18-19, Stenzel, cols. 1640-1641) think that Speusippus' interest in biology was limited to the use of it in logic and classification. But we cannot be sure. We should for example have a very poor idea of Aristotle's interest in zoology if the only evidence about his biological works were the quotations found in Athenaeus. And we must also take into consideration that Aristotle's and Theophrastus' biological works, which in all probability were much more detailed and perfect than those of the Academy, must have eclipsed the work of their predecessors in the field. On Speusippus', Aristotle's, and Theophrastus' interest in plants and animals and on their predecessors in this field cf. Strömberg, *Theophrastea. Studien zur botanischen Begriffsbildung* (Göteborg, 1937), pp. 17-22 with references, esp. p. 19, notes 1-4 and p. 20, notes 2, 3, and 5. On the relation of the "Ὅμοια to Speusippus' logic and theory of knowledge, cf. pp. 64 ff. *supra*.

F 28

On the text cf. [Iamblichus], *Theologoumena Arithmeticae*, pp. 82, 10-85, 23 (de Falco); Ast, pp. 61, 8-63, 22; Lang, pp. 53-57; Philolaus 44 A 13 (I, pp. 400, 22-402, 11 [Diels-Kranz]). The following translations with notes have also been taken into consideration: P. Tannery, *Mémoires scientifiques*, I, pp. 281-289; *Pour l'histoire de la science hellène*², pp. 386-388 and 400-404; I. Thomas, *Greek Mathematics*, I, pp. 74-83; A. Maddalena, *I Pitagorici*, pp. 173-177; M. Timpanaro Cardini, *Pitagorici*, II, pp. 126-138; and the bibliographical notes of U. Klein in the reprint of de Falco's edition (Stuttgart, 1975), pp. XXV, XXVIII, and XXXV-XXXVI.

The text and critical apparatus of this fragment are independent of any of the editions mentioned above; but for the manuscript tradition and for the readings of the MSS I have relied on de Falco's edition. From line 1 to line 30 the text is extant only in the second family of MSS (= β); from line 31 (*καὶ τὰ τέσσαρα κτλ.*) until the end of the *Theologoumena* it is extant also in the first family (= α), but only in A, not in E, the other witness of this branch of the tradition. The importance of A and its independence of β are obvious, since A enables us to fill a lacuna in the text of Speusippus (cf. on lines 50-55). In his critical apparatus de Falco cites the readings of six MSS of the second family, namely MLPNBF (on the Escorialensis Σ . III. 1, ff. 1-31, cf. pp. VII-VIII of de Falco's edition and his

paper in *Riv. Indo-Grec.-Ital.* 7, fasc. III-IV [1923], pp. 139-141; on the *Parisinus Graecus* 2533 cf. de Falco, in *Miscellanea Galbiati*, II [Milano, 1951], pp. 163-168). Since LPNBF are directly or indirectly derived from M (cf. de Falco, pp. XII-XIII), the readings of these five MSS need not be reported in the critical apparatus; they may be cited for those readings which are conjectures (cf. also H. Oppermann, *Gnomon* 5 [1929], p. 547). The *editio princeps* of the *Theologoumena* (Paris, 1543) was based on an inferior MS (*Paris. Gr.* 1943), and Ast's edition (Lipsiae, 1817) was itself based on the *editio princeps*.

1-14 Ὅτι . . . αὐτῆς. This passage, which introduces the actual quotation from Speusippus' treatise, may be divided into two parts: the first (lines 1-5 ὅτι . . . ἀριθμῶν) provides information about Speusippus, his alleged sources, and the title of his book; the second (lines 5-14 ἀπ' ἀρχῆς . . . περὶ αὐτῆς) describes the contents of the first (lines 5-9) and of the second part (lines 9-14) of Speusippus' *Περὶ Πυθαγορικῶν ἀριθμῶν*. Cf. on 5-9 and on 9-14 *infra*.

1 Ὅτι καὶ Σπεύσιππος. This way of beginning the report on Speusippus singles out this whole passage (lines 1-62)—as well as many others in the *Theologoumena*—as an excerpt, cf. Oppermann, *op. cit.*, pp. 550-558, esp. 550-551. We must therefore raise the question, from whom has the author of the *Theologoumena* taken this excerpt. Whether it is from Iamblichus or from somebody unknown to us, depends on the view one takes about the sources and the authorship of the extant *Theologoumena*, on which cf. on lines 1-62 *infra*.

δ Πωτώνης. The emendation is certain. On the spelling Πωτώνη cf. on T 1, line 4 *supra*.

2 διάδοχος . . . Ξενοκράτου. Since Speusippus succeeded Plato as head of the Academy (cf. T 1, lines 2-3 with comm. *ad loc.*) and was himself succeeded by Xenocrates (cf. Diog. Laert. IV, 14; *Acad. Index Hercul.*, VI, 38-VII, 6 = T 2, lines 11-23), παρὰ, the reading of M, cannot be right despite the two attempts made to retain it. Thus, Ast placed a comma after Ἀκαδημίας and took παρὰ Ξενοκράτου with what follows. This is impossible, however; for, even apart from the fact that αἰ would be difficult to explain (cf. Tannery,

*Histoire*², p. 386, n. 1), Ast's interpretation requires the excision of ἐκ τῶν and makes nonsense of what follows (cf. on lines 2-4 *infra*). Lang, p. 53, for his part, keeps παρά on the ground that διαδέχεσθαι παρά τινος is common, whereas πρό does not go well with διάδοχος. But the construction here is διάδοχος followed by a genitive. If we take διάδοχος here in the sense "head of a school" (cf. LSJ, s.v. 6d), the whole phrase means "head of the Academy before Xenocrates." Whereas πρό makes sense, παρά does not and, *pace* Lang, there is no reason to impute such a mistake to the author of the excerpt. παρά for πρό may be due to a scribe's misunderstanding of an abbreviation of πρό.

Ξενοκράτου. Since this form of the genitive of the third declension is attested (cf. Kühner-Blass, *Ausf. Grammatik der griech. Sprache*, I⁸ [Hannover und Leipzig, 1890], p. 513), and since the excerpt is by a late author, the reading of M may well be right.

2-4 ἐκ . . . συγγραμμάτων. Tannery, *Histoire*², pp. 386-387, following Ast, excises ἐκ τῶν and translates, "ne cessa d'étudier tout particulièrement les leçons des pythagoriciens et surtout les écrits de Philolaos; il composa etc." (Thomas, *Gr. Math.* I, p. 75 follows Tannery's translation, though he keeps ἐκ τῶν in his text.) But σπουδασθεισῶν is passive, and both its gender and its number show that it modifies ἀκροάσεων (so, correctly, the translations of Madalena and Timpanaro Cardini). The whole phrase must be taken closely with βιβλιδίων τι συντάξας γλαφυρόν, "from the Pythagorean lectures, always eagerly studied, and particularly from the writings of Philolaus, he composed a subtle little book."

This being so, it is necessary to discuss two questions: (a) are the doctrines put forward by Speusippus in his "On Pythagorean Numbers" Pythagorean and especially Philolaic? (b) did Speusippus himself refer to the Pythagorean lectures and to Philolaus as sources of his treatise? A majority of historians of early Greek mathematics and philosophy give an affirmative answer to the former question and make use of this fragment in their reconstructions of early Pythagorean doctrine.⁶⁷ Now Speusippus probably

⁶⁷ Cf. e.g. Tannery, *Histoire*², pp. 386 ff.; Diels-Kranz, *FVS*, I, pp. 400-402; Heath, *Hist. Gr. Math.*, I, p. 72; Heath, *Manual*, p. 43; Burnet, *Early Greek Philosophy*⁴, pp. 102-103 with 102, n. 2, 278, 290, n. 1; Raven, *Pyth. and Eleatics*, pp. 97, 139, 141 f.; Kirk-Raven, *The Presocratic Philosophers*, p. 255; Kucharski, *Étude sur la doctrine Pyth.*, pp. 20-26; Guthrie, *Hist. Gr. Philos.*, I, pp. 260-261; Timpanaro Cardini, *Pitagorici*, II, pp. 126 ff.; etc.

did emphasize the Pythagorean antecedents of his own doctrines (cf. p. 109 *supra*) and must have done so in this treatise, where he uses some doctrines attested for the pre-Platonic Pythagoreans (cf. on lines 4-5, 10, 15, 33-36). One must however say that he uses Pythagorean notions in the course of putting forward his own mathematical and metaphysical doctrines; and these doctrines are not only at variance with early Pythagorean tenets but often incompatible with them (cf. esp. on lines 7-8, 8-9, 9, 9-14, 15, 18-22, 21-22, 33-36). It is also noteworthy that at the latest by the first century A.D. Moderatus, Nicomachus, and others (cf. e.g. Porphyry, *Vit. Pyth.* 53 = T 49) were claiming for the early Pythagoreans the main doctrines of Plato, Speusippus, Xenocrates, and Aristotle and that there arose a whole literature of Pythagorean pseudepigrapha. One of the purposes of this literature was precisely to show that several Platonistic and Peripatetic doctrines were already to be found in the alleged works of the early Pythagoreans. It is therefore unjustified both to make use of F 28 for the reconstruction of early Pythagorean doctrine and to give as a reason for doing so the agreement of this Speusippean text with Pythagorean *testimonia* and fragments the authenticity of which is open to serious doubt.

This conclusion must be taken into consideration in discussing question (b). While some scholars (e.g. Frank, *Plato*, pp. 140-141, 242-243, 310, 332; Cherniss, *Crit. Pres. Philos.*, pp. 241, n. 111, 390-391; Mondolfo, *ZM*, II, pp. 345-347) think that Speusippus himself referred to Philolaus, others (e.g. Wilamowitz, *Platon*, II, p. 88; Theiler, *Gnomon* 7 [1931], p. 352; Burkert, *Lore and Science*, p. 246 and n. 40) emphatically deny this. Burkert contends that the very wording of the passage shows that it cannot go back to Speusippus, since such a way of naming one's sources would be unique in ancient literature, and since the vocabulary itself is late (on ἀκρόασις, σπουδάζω, and ἐξαίρετως cf. the following notes). One must admit that Speusippus could not have referred to "Pythagorean lectures" nor, in all probability, to "*writings* of Philolaus." But the fact that the wording of these lines is due to the author of the excerpt does not suffice to exclude the possibility that Speusippus may have mentioned Philolaus' name and even his book (cf. *infra* on τῶν . . . συγγραμμάτων), though of course it is impossible to ascertain that he did so (cf. also Philip, *Phoenix* 17 [1963], p. 255, n. 6, who, however, speaks of "*writings*"). We cannot even be sure that the title of the book goes back to Speusippus himself (cf. on

lines 4-5 *infra*). But even if it does not, it is nevertheless more probable than not that Speusippus did refer to the "Pythagorean numbers." And it was then easy for late writers, to whom Pythagorean pseudepigrapha and pseudo-Philolaic texts were available, to claim for the early Pythagoreans and for Philolaus in particular the contents of Speusippus' book. (On the decad cf. on line 10 *infra*; n.b. that the author of the *Theologoumena* is acquainted, probably through Nicomachus, with "Pythagorean" and "Philolaic" speculations about the number ten, cf. *Theol. Arith.*, pp. 79, 16 ff., 80, 1 ff., 81, 15 ff.) But there is no reason to think that Speusippus put forward all the doctrines in this treatise as Pythagorean (cf. on lines 7-8 with note 68 *infra*).

ἐξαιρέτως. This adverb is attested late in extant Greek literature, cf. LSJ, s.v. ἐξαιρετός IV.

σπουδασθεισῶν. = "Studied," cf. LSJ, s.v. σπουδάζω I, 4. On ἐσπουδάσθη used in connection with the study of number cf. Moderatus in Porphyry, *Vit. Pyth.* 48 (p. 43, 10 [Nauck]).

ἀκροάσεων. Mondolfo, *ZM*, II, p. 347, Timpanaro Cardini, *Pitagorici*, II, p. 126, and others think that with ἀκροάσεις and συγγράμματα the author of the excerpt (perhaps even Speusippus himself) is here calling attention to the distinction between "oral" and "written" doctrines in the early Pythagorean tradition. The significant fact, however, is that ἀκροάσεις is used here of alleged lectures that have been written down. This presupposes an established school where regular lectures are given, as was the case in the early Peripatos. Some of Aristotle's lectures were later called ἀκροάσεις (cf. Rose, *Aristotelis Qui Ferebantur Librorum Fragmenta*, pp. 6, nr. 75 [Diog. Laert.], 13, nr. 70, 16, nr. 148 [Hesychius]), but such titles do not even go back to Aristotle himself. He once refers to lectures as αἱ ἀκροάσεις (*Metaphysics* 994 B 32), and this passage may have caused later editors of his works to name so some of his treatises. But it is clear that for Aristotle ἀκροάσεις means the thing listened to, and that for him and for his contemporaries the word indicated what can be heard at a single seating, whether it is a "lecture" or not (cf. *Poetics* 1459 B 21-22, Aristoxenus, *Harmonica* II, 30, Cherniss, *AJP* 68 [1947], p. 236, n. 76 = *Selected Papers*, p. 187). Hence, whatever the truth about an early Pythagorean oral

doctrine, the author of the excerpt is anachronistically projecting into earlier times a state of affairs which is much later than the early Pythagoreans, and this fact renders suspect his statement concerning Speusippus' sources. (On the late ἀκρόασις of Pythagoras cf. Nicomachus, ap. Porphyry, *Vit. Pyth.* 20 [p. 27, 3-5 Nauck]; cf. Iamblichus, *Vit. Pyth.* 30 [p. 17, 13 Deubner].)

τῶν . . . συγγραμμάτων. The earliest tradition speaks of Philolaus as the author of one book (cf. Burkert, *Lore and Science*, pp. 223-227), and so the excerptor's reference here to "books" is suspect.

4-5 βιβλιδίων . . . ἀριθμῶν. Since ἐπιγράφειν is here used in the sense "to entitle" (cf. LSJ, s.v. II, 2), it is clear that the author of the excerpt had in front of him a small book (βιβλιδιον) entitled Περὶ Πυθαγορικῶν ἀριθμῶν, and that he thought that this title went back to Speusippus himself. It is not certain that it does, however, because the question of titles of ancient books is a difficult one (cf. on T 1, lines 35-65 and n. 14 there), and also because Speusippus seems to have discussed more than numbers (cf. on lines 7-8). But even if the title does not go back to Speusippus, I consider it to be more probable than not that he himself spoke of "Pythagorean numbers" (on which cf. this note *infra*). There is of course no evidence to support Zeller's suggestion (II, i, p. 1006, n. 3) that the treatise "On Pythagorean Numbers" was originally part of the Μαθηματικὸς (T 1, line 61), a suggestion opposed by Lang, pp. 28 and 46 f., but merely on the ground that the latter work must have been a dialogue (cf. on T 1, lines 35-65), whereas the treatise "On Pythagorean Numbers" was not.

γλαφυρόν. This may mean "neat," "delicate" (e.g. Tannery, Thomas), but "subtle" seems to fit the context better. Cf. LSJ, s.v. III, 1 with Iamblichus, *In Nicom. Arith. Intr.*, p. 20, 13 (Pistelli).

Πυθαγορικῶν ἀριθμῶν. Some of the early Pythagoreans, conceiving numbers to have magnitude (cf. Aristotle, *Metaphysics* 1080 B 16-20, 30-33; Burkert, *Lore and Science*, pp. 31-34), represented them by arrangements of points in space making up particular figures (cf. Aristotle, *Physics* 203 A 13-15 with Burnet, *Early Greek Philosophy*⁴, pp. 103-104; Aristotle, *Metaphysics* 1092 B 8-13, Theophrastus, *Metaphysics* 6 A 19-22, Cherniss, *Crit. Pres. Philos.*, pp. 239-240 with notes 103 and 104, 387, 389). In this treatise, Speusippus

makes use of this conception (cf. lines 5 ff., 33 ff., etc.) for his own purposes (cf. esp. on lines 33-36 *infra*). It is intelligible, then, that he should have called the "linear," "triangular," etc. numbers "Pythagorean numbers," a name which seems not to be attested elsewhere in extant Greek literature.

5-9 ἀπ' ἀρχῆς . . . ἀντακολουθίας. This passage describes the contents of the first part of Speusippus' treatise. Tannery, *Histoire*², p. 387 and others think that three things were discussed in it: numbers, the five regular solids, and proportions. But to get this out of the text they have to emend it and, in so doing, they eliminate a most important part of Speusippus' doctrine (cf. on lines 8-9 and 9 *infra*). It appears, moreover, that Speusippus did discuss ratios and progressions in the second part of this book (cf. on lines 32-33 and 36-38 *infra*). There is nothing strange in this, since in the decad Speusippus finds the fundamental properties of, and relations between, all numbers. If the excerptor's report is trustworthy, Speusippus discussed certain kinds of numbers (linear, plane, and solid) and the regular solids in the first part of his treatise.

5-7 περὶ . . . στερεῶν. Do these lines refer to three kinds of numbers, linear, plane (which include the polygonal), and solid, as Lang, p. 53 thinks, or to four kinds, linear, polygonal, plane, and solid, as Tannery, *Histoire*², p. 387 would have it? The point is important, because Nicomachus (II, 6, 1 ff. [p. 82, 20 ff., Hoche]) considers triangular and pentagonal numbers to be plane numbers, whereas in Euclid's view the polygonal are different from the plane numbers, since the latter are the product of two numbers (cf. Euclid, *Elem.* VII, Def. 17). Lang's interpretation is right, because Speusippus himself says, *à propos* of "linear," "plane," and "solid" numbers, that two is a line, three is a triangle, and four a pyramid (cf. lines 34-35 *infra*). He must therefore be thinking of the representation of numbers by the arrangement of dots (cf. on lines 4-5 *supra*). Otherwise, he would not have said that three is a triangle (i.e. a plane) and four a pyramid (i.e. a solid). For in Euclid four is the first plane and eight the first solid. Speusippus is therefore at variance also with Plato who, like Euclid, thinks that plane numbers are the product of two, and solid numbers the product of three, numbers (cf. *Theaetetus* 147 E-148 B, *Timaeus* 31 C-32 B; cf. also the pseudo-Platonic *Epinomis* 990 D 1-E 1 with Tarán, *Academica*,

pp. 330-331 and 334-335). On the different views of Euclid and of Nicomachus cf. Heath, *Euclid's Elements*, II, pp. 287-290.

5-6 *περὶ . . . γραμμικῶν*. This seems to be the first occurrence in extant Greek literature of *γραμμικοί* (sc. *ἀριθμοί*). Tannery, *Mém. Sc.*, I, pp. 110 and 285, n. 3, followed by many critics (e.g. Heath, *Hist. Gr. Math.*, I, pp. 72-73; Timpanaro Cardini, *Pitagorici*, II, p. 127), contends that *γραμμικοί ἀριθμοί* means "prime numbers" (which in line 22 are called *πρῶτοι καὶ ἀσύνθετοι*). There can be no question that this is the meaning of the expression in some later authors (cf. e.g. Theon, p. 23, 9-14 [Hiller]), but it is hardly likely that this is what Speusippus meant. For he, unlike his contemporaries and predecessors, considers "one" to be the *first* number and to be a *prime* number (cf. lines 18-22 with note *ad loc.*), and "one" cannot be represented as a line. Moreover, Speusippus clearly implies that two is the *first* linear number. Furthermore, if he had called the prime numbers "linear," one would have expected him to consider four the first plane and eight the first solid number, whereas Speusippus thinks that three is the first plane and four the first solid number (cf. lines 33-36 *infra*). It is of course possible that the early Pythagoreans did call the prime numbers "linear," but it is noteworthy that even a late author such as Nicomachus still takes the expression "linear numbers" to mean the representation of any numbers by means of lines (cf. *Intr. Arith.* II, 7, 3 [p. 86, 21-25, Hoche]: οἷον καθ' ὑποδιαίρεσιν γραμμικοὶ μὲν εἰσιν ἀριθμοὶ ἀπλῶς ἅπαντες οἱ ἀπὸ δυάδος ἀρχόμενοι καὶ κατὰ μονάδος πρόσθεσιν ἐπὶ ἓν καὶ τὸ αὐτὸ προχωροῦντες διάστημα. Cf. also II, 13, 6 [p. 101, 1-7, Hoche]). And in all probability this is all that Speusippus means by them.

It ought to be obvious that the contention of Zeller, II, i, p. 1005, n. 5, that *περὶ τῶν ἐν αὐτοῖς γραμμικῶν* means "die aus den Zahlen sich ergebenden geometrische Verhältnisse," is utterly impossible. By "linear," "polygonal," "plane," and "solid" numbers Speusippus meant merely the representation of numbers by dots making up particular geometrical figures.

6 *πολυγωνίων*. Polygonal numbers were discussed also by Philip of Opus in his treatise *Περὶ πολυγώνων ἀριθμῶν* (cf. Test. 1 [Tarán]). And the conception of polygonal numbers as arrangements of points, which is presupposed here by Speusippus (cf. on lines 5-7),

was known to the early Pythagoreans, cf. Aristotle, *Physics* 203 A 13-15, Burnet, *Early Greek Philosophy*⁴, pp. 103-104, Heath, *Hist. Gr. Math.*, I, pp. 76 ff., II, pp. 213, 514-517, Heath, *Diophantus*, pp. 124-127 and 247-259.

6-7 παντοίων . . . στερεῶν. Plane and solid numbers are also mentioned by Plato (*Timaeus* 31 C-32 B), who in the *Theaetetus* (147 E-148 B) names some species of plane numbers. (Speusippus' conception of plane and solid numbers, however, is different from Plato's, cf. on lines 5-7 *supra*.) Though it says here that Speusippus dealt with "all sorts of plane and solid numbers," we know nothing about them except for his mentioning the triangular and pyramidal numbers in the second part of this fragment (cf. lines 33-35) and for the different triangles and pyramids described in lines 43-60.

7-8 περὶ . . . στοιχείοις. This is a reference to the five regular solids, cube, icosahedron, octahedron, tetrahedron, dodecahedron, which in the *Timaeus* (47 E-57 C) are assigned, respectively, to the four simple bodies, earth, water, air, fire, and to the universe as a whole. The author of the *Epinomis* (981 B-C; cf. 984 D-E), however, assigns the dodecahedron to the ether, which he regards as a fifth simple body, and Xenocrates does the same (cf. frag. 53 [Heinze]). But whereas the former locates the ether between fire and air, the latter places it above or "outside" the sphere of fire (cf. Tarán, *Academica*, pp. 36-42). Most scholars (e.g. Zeller, II, i, pp. 1007-1008 and 1008, n. 1; Lang, p. 26; Moraux, *RE* 24 [1963], cols. 1176, 60-65, 1180, 18-30, 1192, 10-1193, 43; Burkert, *Lore and Science*, p. 71; Isnardi Parente, pp. 923-924; Guthrie, *History*, V, p. 463, n. 1), on the basis of the present passage, think that Speusippus, too, discussed the identification of the five regular polyhedra with the five simple bodies and that he himself believed in five elements. The words ἀ τοῖς κοσμικοῖς ἀποδίδεται στοιχείοις, however, may be a parenthetical remark of the author of the excerpt and need not represent anything in Speusippus' book at all. Zeller thinks that this alternative is improbable; but, given the purely mathematical character of Speusippus' treatise, it is possible that the sentence ἀ . . . στοιχείοις is due to the excerptor, who must have been well acquainted with the late ascription of the five regular solids and of the four or five simple bodies to the early Pythagoreans, cf. Aetius, II, 6, 5 and the other texts collected by Sachs, *Die fünf*

platon. Körper, pp. 9-15; cf. also Burkert, *op. cit.*, pp. 70 with notes 113-114, 409-412. (Philolaus 44 B 12, whether or not it refers to the five regular polyhedra, is most probably spurious, cf. Burkert, *op. cit.*, p. 276.)

Be that as it may, the construction of the five regular solids seems to have been completed by Theaetetus (cf. schol. 1 on Euclid, *Elem.* XIII [V, p. 654, Heiberg]; Suidas, s.v. Θεαιτήτος; Heath, *Euclid's Elements*, III, p. 438 f.; Sachs, *op. cit.*, pp. 76 ff., 86 ff.; Mondolfo, *ZM*, II, p. 512), and this had apparently not yet been accomplished at the dramatic date of Plato's *Republic* (ca. 411-410 B.C.; cf. *Republic* 528 A-E). It is clear then that the construction of the five regular solids cannot have been known to the early Pythagoreans, including Philolaus. And it is highly improbable that Speusippus would have ascribed to them a doctrine which must have been a relatively recent discovery at the time he wrote, and the ascription of which to the Pythagoreans would have been patently anachronistic.⁶⁸

As Tannery, *Histoire*², p. 387, n. 2 says, this passage shows that in this treatise Speusippus also dealt with purely geometrical doctrines and not merely with numbers, "Car, si les anciens ont pu dénommer des nombres comme *pyramides* (tétraèdres) ou *cubes* (hexaèdres), ils ne semblent jamais en avoir considéré comme octaèdres, dodécaèdres ou icosaèdres." This is presumptive evidence against ascribing the title of the treatise to Speusippus himself. Cf. on lines 4-5 *supra*.

⁶⁸ Burkert, *Lore and Science*, p. 71 says that Speusippus "treated the derivation of the elements from the regular solids as Pythagorean," while Isnardi Parente, p. 924 maintains that Speusippus purposely ascribed the five regular solids to the Pythagoreans and that in so doing he was following the example of Plato's *Timaeus*. This last contention is surely arbitrary, because there is not a word in Plato about the alleged Pythagoreanism of *Timaeus* and because such an interpretation contradicts the testimony of Aristotle and others (cf. Cornford, *Plato's Cosmology*, pp. viii-xii and 2-3). Nor is there any reason to think that Speusippus tried to pass off as Pythagorean all the doctrines to be found in his treatise. The statement about his sources cannot go back to him (cf. on lines 2-4 *supra*), and it is not even certain that he himself entitled his treatise "On Pythagorean Numbers" (cf. on lines 4-5 *supra*). Even if he did, however, the use he makes of the early Pythagorean conception of figurate numbers suffices to explain the title. But his doctrines in this treatise are more often than not essentially at variance with those of the early Pythagoreans (cf. on lines 2-4 *supra*) and several of them are independently attested and implicitly or explicitly ascribed to him by Aristotle (cf. esp. p. 109 *supra* and on lines 1-62 *infra*).

8-9 **ιδιότητος . . . κοινότητος.** Most scholars follow Tannery, *Mém. Sc.*, I, p. 282 who takes this phrase to refer to the individual and correlative properties of the five regular solids. But this interpretation cannot be right because it cannot explain the words *ἀναλογίας τε καὶ ἀντακολουθίας* (cf. the following note), which must be taken together with the phrase we are discussing. In fact, the whole phrase *ιδιότητος . . . ἀντακολουθίας* refers to the whole preceding description of the contents of the first part of Speusippus' treatise (lines 5-8) and summarizes his method of treating the objects of the sciences and their respective *ἀρχαί* (in this case numbers [arithmetic] and magnitudes [geometry] and their *ἀρχαί* [pp. 13-47 *supra*]) as an investigation of their individual and common properties, and of their similarities and correspondences. And even in the verbatim quotation about the decad (lines 14-62) we have some evidence of how Speusippus employed this method (cf. the following note and pp. 53-64 *supra*). Lines 8-9 were correctly interpreted by Cherniss, I, n. 55 (pp. 74-75).

9 **ἀναλογίας τε καὶ ἀντακολουθίας.** Some scholars (e.g. Lang, pp. 25 and 54) keep the reading of the MSS and refer these words to the preceding *πέντε σχήματα*. But the meaning is not appropriate, for, though *ἀναλογία* = "proportion" is intelligible in this context, *ἀντακολουθία* = "reciprocity," "reciprocal implication," or "correspondence" is not. Tannery, *Mém. Sc.*, I, pp. 282 and 285, n. 5 thinks that these words refer to what he takes to be the third division of Speusippus' treatise, namely "proportions" (cf. on lines 5-9 *supra*), and consequently suggests inserting *περί*, a suggestion that de Falco, Thomas, Timpanaro Cardini and others have adopted in their texts. *ἀντακολουθία*, however, *pace* Timpanaro Cardini, does *not* mean "discontinuous proportion," nor does *ἀνακολουθία* (Ast's emendation, adopted by Tannery and others) have that meaning either. Moreover, "proportion continuous and discontinuous" is difficult (perhaps impossible) to explain, as Thomas, *Gr. Math.*, I, p. 77, n. *b* says, and the same thing may be said of his own interpretation "proportion and reciprocity." The transmitted text is intelligible, however, and it is wrong to emend it. The words *ἀναλογία* and *ἀντακολουθία*, which Speusippus himself probably used, must be understood within the perspective of his metaphysics and theory of knowledge.

In this context, *ἀναλογία* does not mean "proportion" or "pro-

gression," as it means in line 36 *infra*, but "analogy" in a more general way (cf. Aristotle, *Metaphysics* 1016 B 31-1017 A 3, *Rhetoric* 1387 A 28, Bonitz, *Index Aristotelicus* 47 B 41-48 A 2). In fact, analogy is one of the all pervasive concepts in the Speusippean universe, because Speusippus thinks that there is a relation of similarity within the classes themselves (cf. F 6-27) and also among the classes and among their respective ἀρχαί: cf. lines 33-36 (discussed *infra*); 55 ὥστε ἐκ τούτου δυάδι εἰοικέναι (sc. the second kind of pyramid); 58 ὥστε τριάδι ἂν ὁμοιοῖτο (sc. the third kind of pyramid); Aristotle, *Metaphysics* 1044 A 7-8 (= F 66a) καὶ ἡ οὐσία ἐν οὕτως, ἀλλ' οὐχ ὡς λέγουσί τινες οἶον μονάς τις οὕσα ἢ στιγμή; 1085 A 32-33 (= F 51) ἡ δὲ στιγμή αὐτοῖς δοκεῖ εἶναι οὐχ ἐν ἀλλ' οἶον τὸ ἐν; *Topics* 108 B 23-31 (= F 65), where n.b. καὶ ὅτι στιγμή ἐν γραμμῇ καὶ μονάς ἐν ἀριθμῷ (ἐκότερον γὰρ ἀρχή) . . . σχεδὸν δὲ καὶ οἱ ὀριζόμενοι οὕτως εἰώθασιν ἀποδιδόναι· τὴν τε γὰρ μονάδα ἀρχὴν ἀριθμοῦ φασιν εἶναι καὶ τὴν στιγμήν ἀρχὴν γραμμῆς, and compare with lines 34 (τὸ μὲν γὰρ ἐν στιγμή) and 61 (πρώτη μὲν γὰρ ἀρχὴ εἰς μέγεθος στιγμή) *infra*.⁶⁹

Concerning ἀντακολουθία, the meaning "reciprocal implication" (cf. *SVF*, II, p. 121, 7; III, p. 67, 44-45) is not appropriate, since Speusippus believes that στιγμή implies μονάς but not vice versa; for the Stoics instead the virtues are one because each virtue implies the existence of all the other virtues. But the meaning "correspondence" (cf. Iamblichus, *In Nicom. Arith. Intr.*, p. 39, 1-2 [Pistelli]) fits the context here. From the texts cited above and from others also (cf. F 29a, F 50-51, F 66b, F 68a-c, F 70-71), it is to be seen that to the similarities among entities in one class correspond similarities among entities in other classes. For example, the point is similar to one, the line to two, the triangle to three, the pyramid to four; and so the relations between point, line, triangle, and pyramid correspond to those between one, two, three, and four (cf. e.g. lines 38-40 and 43-60 *infra*). To the monad as the ἀρχή of number corresponds the point as the ἀρχή of magnitude, etc. There is moreover another type of relation which the word ἀντακολουθία probably covers. Thus in lines 33-35 Speusippus says

⁶⁹ In view of the evidence cited (cf. also pp. 53-77 *supra*) we may reject the contention of Kullmann, *Wissenschaft und Methode*, p. 149, "Bezeichnenderweise ist der relativ weite Begriff der Analogie für Speusipp nicht sicher bezeugt" and *ibid.* n. 41, Auf fr. 4 L(ang). p. 53 f. Zeile 11 (= F 28, 9) wird man nicht viel geben wollen."

that the linear, the plane, and the solid numbers are to be found in the decad because one is a point, two a line, three a triangle, and four a pyramid. This means that when we consider the numbers as figurate numbers they have certain properties that are primarily the properties of magnitudes (cf. further on lines 33-36 *infra*). In short, ἀντακολουθία is the necessary complement of “analogy.” Speusippus’ conception of the unity of all knowledge and of definition requires that within the classes, among the classes, and among the ἀρχαί there should be relations of similarity (or analogy) and of correspondence (cf. F 63-68 and F 70-74 and pp. 53-64 *supra*). And in this treatise he treated numbers, magnitudes, and their ἀρχαί in this way, as is to be seen even in the verbatim quotation.

9-14 *μετὰ . . . προεκκειμένην*. The second part of the treatise was devoted to the decad, and, before the actual quotation of Speusippus, the author of the excerpt offers a résumé of it. There is no reason to think, as Tannery, *Mém. Sc.*, I, p. 286, n. 6 and others do, that the contents of lines 10-14 have been contaminated by the excerptor’s Neoplatonism or Neopythagoreanism, for there is nothing in them that is incompatible with Speusippus (cf. the following notes). Nor are there good grounds to question the excerptor’s reliability (cf. also on lines 1-62 *infra*).

10 *περὶ δεκάδος*. On the importance of the decad for the early Pythagoreans cf. Aristotle, *Metaphysics* 986 A 8-10 (quoted in note on line 15 *infra*); but the Philolaic (44 B 11) and Archytan (47 B 5) fragments about the decad are most probably spurious (cf. Burkert, *Lore and Science*, pp. 273-275 and on lines 13-14 *infra*).

The fact that Speusippus describes the decad as having separate existence (cf. on φυσικωτάτην, and on lines 11-12, 12-13, and 13-14 *infra*) shows that not everything in lines 10-14 can go back to the early Pythagoreans, for such “separation” is not earlier than Plato according to the testimony of Aristotle (cf. on F 29a and pp. 13-14 *supra*).

φυσικωτάτην. This implies that the decad is that entity which by itself has separate and objective existence *par excellence* (cf. lines 12-14 *ἐφ’ ἑαυτῆς ἀλλ’ οὐχ ἡμῶν νομισάντων ἢ ὡς ἔτυχε θεμένων ὑπάρχουσιν καὶ παράδειγμα παντελέστατον . . . προεκκειμένην*). Since according to Speusippus the mathematical numbers have separate existence and are directly apprehended by the mind (cf. pp. 16-23 *supra*),

and since the relations between, and the fundamental properties of, numbers are seen to be present in all the other kinds of entities (cf. pp. 26 ff. *supra*), they have logical, epistemological, and ontological priority in respect to everything else. Within the numbers the decad has logical (*not* ontological) priority, since it is the “perfect number” which comprises within itself the fundamental relations between, and properties of, all the other numbers, of which it is the *πυθμήν* (line 24). Hence it is *φυσικωτάτη* (cf. also lines 14-17 and n.b. *κατὰ φύσιν*), i.e. the most natural entity. For the Platonic ideas existing *ἐν φύσει* or *φύσει*, cf. *Phaedo* 103 B 5, *Republic* 501 B 2-4, *Parmenides* 132 D 1-3.

11 ἀποφαίνων. Not “showing,” but “declaring.”

τελεστικωτάτην τῶν ὄντων. Since in the phrase which follows these words the decad is likened to an *εἶδος τι . . . τεχνικόν*, the meaning here is “most perfective of realities” or “fittest of entities for bringing to fulfillment.” Speusippus, who probably thought that the universe is everlasting (cf. on lines 13-14 *infra*), must have meant *τελεστική* in a metaphorical sense (cf. also on lines 11-12 *infra*). Plato, too, uses *τελεστικός*, but of the *μαντικὸς βίος* and of *μανία* (*Phaedrus* 248 E 1; 265 B 4) only. The author of the excerpt preceding F 28 (cf. *Theol. Arith.*, pp. 79, 5-82, 10 [de Falco]), whether Nicomachus (cf. Oppermann, *Gnomon* 5 [1929], p. 555), Iamblichus, or somebody else, says of the decad *τελεστικὸς τῶν ἀπάντων* (p. 81, 10).

11-12 οἶον . . . τεχνικόν. The decad is here likened to an organizing shape or pattern of cosmic events. Since Speusippus is also said to have held that the decad is a *παράδειγμα παντελέστατον τῷ τοῦ παντὸς ποιητῇ θεῷ προεκκειμένη*, that is, since he used the vocabulary of Plato's *Timaeus* (cf. on lines 13-14 *infra*), it was probably his purpose to indicate that in his system the separately existing numbers, and especially the decad, have functions similar to those of the ideas in Plato (cf. also pp. 21-22 *supra*).

τοῖς κοσμοικοῖς ἀποτελέσμασι. *ἀποτελεσμα* is here used in the sense “event,” “result” (cf. LSJ, *s.v.* 2). Apart from this passage, the word does not seem to be attested before the Hellenistic age. There is no reason, however, why Speusippus could not have used it. Most of the words used in lines 10-14 were probably meant to recall the vocabulary of Plato (cf. on line 10, *φυσικωτάτην supra* and on

lines 13-14 *infra*), and so it is reasonable to suppose that the excerptor is summarizing Speusippus' thought and using the latter's own terminology. It is noteworthy that in the excerpt on the decad which precedes F 28, where some of the words used by Speusippus occur, ἀποτέλεσμα is not used. Cf. *Theol. Arith.*, p. 79, 5-8 (de Falco): πολλάκις ἔφθηνεν εἰπόντες τὸν τεχνικὸν νοῦν πρὸς τὰς ἀριθμοῦ ἐμφερείας καὶ ἀφομοιώσεις ὡς πρὸς παράδειγμά τι παντελὲς ἀπεργάσασθαι τὴν τοῦ κόσμου καὶ τῶν ἐν κόσμῳ πάντων κατασκευὴν τε καὶ σύστασιν.

τεχνικόν. The word here implies that, as the decad exists by nature (cf. on line 10 *supra*) and is not the result either of convention or of chance (cf. on lines 12-13 *infra*), the universe, of which the decad is the pattern, is the result of τέχνη. For Plato's view of nature as the result of divine τέχνη cf. *Sophist* 265 C-E, *Timaeus* 33 C 8-D 1, *Laws* 889 E-892 C, and Cherniss, I, pp. 250-251.

Plato uses the adjective τεχνικός of persons (*Euthyphro* 15 B 10, *Ion* 542 A 2-4, *Laws* 696 C 2), of sciences or τέχναι (*Philebus* 56 B 6), of activities (n.b. *Sophist* 234 B 1-2, where in τι τεχνικώτερον . . . εἶδος ἢ τὸ μιμητικόν, εἶδος means the "part" of a class, however), and of the products of "art" (*Phaedrus* 273 B 3, *Laws* 889 A 8). In this last case the adjective means "artificial" (cf. also LSJ, s.v. II, 1), whereas Speusippus seems to have used the word in the active sense and in reference to a thing. To this I have not been able to find a parallel. The Stoics used the word of φύσις (cf. *SVF*, II, p. 135, 33) and of fire (cf. *SVF*, I, p. 34, 23-25 and 34), but according to them φύσις and πῦρ are truly "productive agents," whereas in Speusippus the decad is οἷον εἶδος τι τεχνικόν in a metaphorical sense only (cf. on line 11 *supra* and on lines 13-14 *infra*). (Note also that in *Theol. Arith.*, p. 79, 5 the word is used of νοῦς.) On τεχνικός in Speusippus cf. also on T 1, line 53.

12-13 ἐφ' . . . ὑπάρχουσιν. M has ἀφ' and ὑπάρχουσα. The participle, however, should be in the accusative, since it must agree with αὐτήν in line 10. Lang retains ἀφ' and θεμένων, whereas Diels, followed by de Falco and others, emends θεμένων to θεμέλιον. ἀφ' is here impossible and must be emended to ἐφ'. And ἐφ' ἑαυτῆς, as the gender shows, must go with ὑπάρχουσιν, not with εἶδος. This phrase then gives the positive notion of which ἀλλ' οὐχ ἡμῶν . . . θεμένων is the negative (cf. Cherniss, I, n. 169 and *AJP* 60 [1939], p. 254 = *Selected Papers*, p. 95). This whole passage therefore means that the

decad has its properties by its own nature (cf. on line 10, φυσικωτάτην *supra*) and not because we believe it to be so or because we suppose that it happens to be so. For οὐχ ἡμῶν θεμένων contrasted with “by nature” cf. Nicomachus, *Intr. Arith.*, p. 50, 21-22 (Hoche) φυσικῶς καὶ οὐχ ἡμῶν θεμένων, and p. 109, 16 φύσει, ἀλλ’ οὐχ ἡμῶν θεμένων.

13-14 παράδειγμα . . . προεκκειμένην. Speusippus claims for the decad what Plato asserts of the general idea of living being with its four sub-classes (cf. *Timaeus* 30 C-31 B, 39 E-40 A). According to this passage the decad is the model (παράδειγμα) of the creating god, just as in the *Timaeus* the παντελὲς ζῶον (31 B 1) is the παράδειγμα (cf. 28 A 7, B 2, C 6, 29 B 4, 31 A 4, 37 C 8, 39 E 7, etc.). The decad is the most complete model; παντελέστατον is probably implicitly directed against the παντελὲς ζῶον of the *Timaeus*, which is not the most complete of entities, but only the general idea of living being (cf. Tarán, *Academica*, p. 87, n. 403 with references). Speusippus’ point, however, is that the model of the universe must be the most complete and perfect entity. παντελής here is not active in meaning (“all accomplishing,” for which cf. LSJ, s.v. II), and it is noteworthy that, whereas in lines 11-13 (τελεστικωτάτην . . . ὑπάρχουσιν) the “active” rôle of the decad is described, lines 13-14 stress its “passive” aspect as the model which the “creating” god “copied.” (παντελής said of the decad in the pseudo-Philolaic fragment 44 B 11 may have been inspired by this summary or by Speusippus’ text itself.) The image of god as the creator of the universe Speusippus also probably took from the *Timaeus* (cf. 28 A 6 ff., 30 A 2 θεός, 28 C 3 ποιητής; on τὸ πᾶν used of the cosmos, cf. 28 C 4, etc.). Since in all probability he thought that the universe is everlasting (cf. on F 61a-b *infra*), Speusippus must have meant this act of creation in a metaphorical sense. So did Plato. And even Aristotle, despite his belief in the eternity of the cosmos, could write (*De Gen. et Corr.* 336 B 25-34, esp. 31-32) τῷ λειπομένῳ τρόπῳ συνεπλήρωσε τὸ ὅλον ὁ θεός, ἐντελεχῇ ποιήσας τὴν γένεσιν (on this whole question cf. Tarán, *Creation Myth*, pp. 380-382, 388-390, 398-400, 404-406). In accordance with the image of the creating god, the model is said to have pre-existed the act of creation (cf. προεκκειμένην). This, too, should be compared with the *Timaeus* (28 A 6-7, 29 A 1-5, 37 D 1, 52 D 3-4, etc.). In view of what precedes, we may reject Tannery’s contention (*Histoire*², p. 388), accepted by Maddalena, *Pitagorici*, p. 173, n. 6 and others, that these lines

contain peculiarly Neoplatonic notions. (On Speusippus' "theology" and on προεκκειμένη cf. also on F 58 *infra*.)

It should be stated that this description of the decad as having separate existence and being the model of the "creating" god, presupposing as it does Plato's *Timaeus*, is incompatible with pre-Platonic Pythagoreanism.

14-15 λέγει . . . "ἔστι δὲ κτλ." From line 14 to the end of this fragment we have a verbatim quotation from Speusippus' treatise, but there seems to be in it at least one parenthetical remark by the excerptor (cf. on lines 22-26 *infra*; also on lines 7-8 *supra*). On the style of the quotation cf. on lines 1-62 *infra*.

15 τὰ . . . τέλειος. Usener's ὁ δέκα for τὰ δέκα is unnecessary, since such variations in gender and number (cf. lines 22-23 ὁ δὲ δέκα) probably go back to Speusippus himself (cf. p. 16 with note 78 *supra*). Diels' supplement, ἀριθμός, adopted by de Falco and others, is not needed, either, for τέλειος = "perfect number" is, as Kranz says (*FVS*, I, p. 401, n.) "*terminus technicus*" for ten, cf. Aristotle, *Metaphysics* 986 A 8-10 (about the Pythagoreans) τέλειον ἢ δεκάς εἶναι δοκεῖ καὶ πᾶσαν περιειληφέναι τὴν τῶν ἀριθμῶν φύσιν. We may therefore reject the contention of Timpanaro Cardini, *Pitagorici*, II, p. 130 that τέλειος here cannot by itself mean "perfect number" because "perfect number" as a "*terminus technicus*" means any number which is equal to the sum of its divisors, e.g. $6 = 1 + 2 + 3$ (cf. Euclid, *Elem.* VII, Def. 23; Heath, *Euclid's Elements*, II, pp. 293-294, 425-426). Moreover, this last meaning of τέλειος ἀριθμός is not attested before Euclid (cf. Heath, *Hist. Gr. Math.*, I, p. 74), though it may be earlier than him, whereas Aristotle testifies to the use of τέλειος of the decad by the Pythagoreans. It is noteworthy that Plato uses τέλειος ἀριθμός of the "nuptial number" in the *Republic* (546 B-D, esp. 546 B 4) and τέλειος ἀριθμός of the "Great Year" (*Timaeus* 39 D 3-4). Later, τέλειος was also used of three (cf. Theon, p. 46, 14-19 [Hiller]), and of nine because it is "generated" from three (*Theol. Arith.*, p. 78, 16).

15-17 καὶ ὁρθῶς . . . ἐπιτηδεύοντες. In the universality of the decimal system (n.b. that the word "Barbarians" is here avoided) Speusippus sees evidence of the decad's preeminence and perfection; for, that we all count up to ten (and then begin again from

one [έν-δέκα] up to [another] ten, etc.) is correct and according to nature (κατὰ φύσιν, cf. on line 10, φυσικωτάτην *supra*), not to our making it so (οὐδὲν αὐτοὶ ἐπιτηδεύοντες). The universality of the decimal system is also found in two late authors, who are said to have been influenced ultimately by Speusippus. Thus, according to Frank, *Plato*, p. 260, n. 1 the contents of Aetius, I, 3, 8 (Diels, *Dox. Gr.*, pp. 280-281) have been taken from several Platonistic writings and then ascribed to Pythagoras, and he contends that the notions that all men count up to ten and that $10 = 1 + 2 + 3 + 4$ go back to Speusippus. Flashar, *Aristoteles, Problemata Physica*, pp. 567-569 follows Frank and cites to the same effect [Aristotle], *Probl.* 15, 3, 910 B 23-911 A 4, where Speusippus' statement about all men counting up to ten is put as a question to which five possible answers, themselves in the form of questions, are proposed. Flashar, unlike Frank, believes that Aetius, the *Probl.* and Speusippus go ultimately back to the early Pythagoreans. Now the universality of the decimal system, ten as the perfect number, and $10 = 1 + 2 + 3 + 4$, all of which we find in these three texts, probably go back to the early Pythagoreans (cf. on lines 10 and 15 *supra* and on 33-36 *infra*). But the universality of the decimal system was a commonplace already in Speusippus' time, let alone in that of Aetius and the *Probl.*, and there is therefore no reason to think that Speusippus need be the ultimate source of these two late texts. Nor is there any reason to ascribe all the other notions found in Aetius and in the *Probl.* either to Speusippus or to the early Pythagoreans. For the differences between Speusippus, on the one hand, and Aetius and the *Probl.*, on the other, are remarkable. Moreover, Aetius and the *Probl.* are not parallel to each other. Finally, some of the notions in these three texts cannot go back to the early Pythagoreans. (For the contents of F 28 which are incompatible with the philosophers mentioned last cf. esp. on lines 7-8, 8-9, 9, 9-14 *supra* and on 18-22, 21-22, and 33-36 *infra*.)

In the passage of Aetius, the most remarkable thing is that doctrines typical of Xenocrates, which cannot be those of Speusippus, are ascribed to Pythagoras (cf. Cherniss, *AJP* 68 [1947], p. 244, n. 86 = *Selected Papers*, p. 195). And in [Aristotle], *Probl.* 15, 3 there are several notions not found in Speusippus and some of which are at variance with his doctrines and also with those of the early Pythagoreans. So are, for example, the explanation of οὐκ ἀπὸ τύχης καὶ αἰεὶ αὖ τὸ δὲ αἰεὶ καὶ ἐπὶ πάντων οὐκ ἀπὸ τύχης ἀλλὰ φυσικόν,

which has been taken from Aristotle (cf. Flashar himself, *op. cit.*, p. 568); the facts that ten as perfect number (in the explanation of which there are terms not found in Speusippus and vice versa, cf. esp. lines 33-36) is given as one of the possible causes of the universality of the decimal system, while $10 = 1 + 2 + 3 + 4$ is given as another; for Speusippus instead the latter notion is one of the reasons why ten is the perfect number (cf. on lines 33-62 and 33-36 *infra*) and the former is not given as one of the reasons for the universality of the decimal system (Speusippus is not even concerned with the reason for the universality of the decimal system). The allusion to the "Philolaic astronomical system" in the *Probl.* (τὰ φερόμενα σώματα ἑννέα), *pace* Frank and Flashar, ultimately comes from Aristotle (*Metaphysics* 986 A 8-12) and need not be ascribed to Speusippus at all (cf. Cherniss, *Crit. Pres. Philos.*, pp. 393-397; Cherniss, I, pp. 558-559; see also on F 62 *infra*). The author mentions *ten ἀναλογίαι* (= proportions or progressions rather than "Zahlenverhältnissen" [Flashar] which means ratios), some of which in all probability are later than Speusippus (cf. on lines 32-33 *infra*). Non-Speusippean is also the notion that the decimal system may be due to the fact that all men have ten fingers.⁷⁰

17-18 πολλά . . . τέλειον. Speusippus divides the properties of ten as a perfect number into (a) those that are peculiar to it (ἰδιᾶ) and (b) those that, though not peculiar to it, it must have as a perfect number. The words which refer to the latter kind of properties of ten (line 18 πολλά . . . τέλειον) were excised by Ast, Tannery, and Diels (*FVS*²), but they have been refuted by Lang, p. 54, note. In fact, the very first property of ten, that it must be even (lines 18-21), is not peculiar to it. The properties of ten which are not peculiar to it are described in lines 18-33, those which are peculiar to it in lines 33-62. But the division is not always strict, for there are properties which ten shares with other numbers but which nevertheless are somewhat peculiar to it (cf. lines 24-26), since the decad is the smallest number (πυθμήν) that has them. (Neither de Falco's proposal to add *δντα* nor Usener's emendation is necessary.)

⁷⁰ What has been said in the text suffices also to refute Burkert, *Lore and Science*, p. 72, n. 122, who, citing additional passages to those discussed here, says that the common source "is obviously Speusippus."

18-22 *πρῶτον . . . συνθέτους*. The first property of ten (lines 18-21) is that it must be even, in order that the number of odd and even numbers in it be the same: 1-3-5-7-9; 2-4-6-8-10. Speusippus' argument here requires one to be an odd number, for he says that ten must be even *ὅπως ἴσοι ἐνῶσιν οἱ περισσοὶ καὶ ἄρτιοι*, and this necessitates that the first number be odd (*ἐπεὶ γὰρ πρότερος ἀέλ ἐστιν ὁ περισσὸς τοῦ ἀρτίου, εἰ μὴ ἄρτιος εἴη ὁ συμπεραίνων, πλεονεκτήσει ὁ ἕτερος*). Now, since the second property of ten is that the number of prime and incomposite numbers in it must be equal to that of the secondary and composite (cf. lines 21-22), it is clear that Speusippus considers one and two to be prime numbers. For, if we started the number series with three (as some Neopythagoreans did [cf. e.g. Nicomachus, *Intr. Arith.* I, 11], who consider prime number to be a property of odd number only [cf. Tarán, *Asclepius on Nicomachus*, pp. 77-78, on I, νη and ξα, with references]), then there would be in ten three prime numbers (3, 5, 7) and five composite ones (4, 6, 8, 9, 10).

The Greeks generally, Plato and Aristotle included, considered two to be the first prime number (cf. Plato, *Republic* 524 D 7, *Parmenides* 143 C-144 A, pp. 14-15 *supra*, Aristotle, *Physics* 207 B 5-8, 220 A 27, *Metaphysics* 1016 B 17-20, 1021 A 12-13, 1052 B 20-24, 1053 A 27-30, 1057 A 3-6, 1088 A 4-8, Euclid, *Elem.* VII, Defs. 1-2); and so for them one is not a number (Aristotle is explicit about this and refers to it as a generally accepted notion [cf. p. 20, note 95 and p. 35 with note 175]; for some late thinkers who treat one as an odd number cf. Cherniss, *Plutarch's Moralia*, vol. XIII, 1, p. 269, n. d). Nor did the early Pythagoreans consider one to be a number, since in all probability they subscribed to the widespread notion that number is a collection of units (cf. Heath, *Euclid's Elements*, II, p. 280; Cherniss, *Crit. Pres. Philos.*, pp. 387 and 389).⁷¹ Speusippus, then, is exceptional among pre-Hellenistic thinkers in that he considers one to be the first prime number. And Heath, *Hist. Gr. Math.*, I, pp. 69-70, followed by Ross, *Aristotle's Physics*, p. 604 and others, is mistaken when he contends that Chrysippus, who is said to have defined one as *πλῆθος ἓν* (cf. Iamblichus, *In Nicom. Introd. Arith.*, p. 11, 8-9 [Pistelli]), was the first to treat one as a number (cf. further p. 38 f. with note 189 *supra*).

⁷¹ Aristotle's statement (*Metaphysics* 986 A 19-20) that the Pythagoreans consider one as both odd and even may be merely a reconstruction of his, cf. Cherniss, *Crit. Pres. Philos.*, pp. 225-226 with n. 38.

Speusippus' notion that one is the first prime number is therefore of importance, and it is unfortunate that most scholars (for an exception cf. Cherniss, I, n. 202) have failed to see the implications of the passage under discussion. Thus, for example, Boyancé, *Le culte des Muses*², p. 255 asserts that for Speusippus three is the first number; Frank, *Plato*, p. 247 makes the same statement and even contends that in Speusippus neither one nor two are numbers; Burkert, *Lore and Science*, p. 247, n. 43 cites Plutarch, *Quaest. Plat.* 3, 1002 A οὐ γὰρ ποιεῖ μονὰς ἀριθμόν, ἀν μὴ τῆς ἀπείρου δυάδος ἔψεται, and says that this "is reminiscent of Speusippus"; and also Isnardi Parente², p. 1035 denies that one is a number. Some historians of Greek mathematics (e.g. Heath, *Hist. Gr. Math.*, I, p. 318; Thomas, *Gr. Math.*, I, p. 83, n. b), who rightly point out that the mathematics of the fragment is rudimentary, have nevertheless failed to see its one claim to originality.

20 ἑτερομερῶς. "One-sidedly," cf. LSJ, s.v. ἑτρομερής. The adverb appears to be a *hapax*, but there is no reason to emend it, as Ast did.

πρότερος . . . ἀρτίου. That the odd is always prior to the even is a Speusippean principle which is in accordance with his doctrines that numbers are the first order of entities (cf. on F 29a *infra*), that one is the first number (cf. on lines 18-22 *supra*), that the point is the principle of magnitude (cf. on line 9 *supra*), etc. Compare with *Divisiones Aristoteleae* § 65 (p. 64, 15-22 [Mutschmann]): φύσει δὲ ἐστὶ πρότερον, οἷον ἢ τε μονὰς τῆς δυάδος . . . , καὶ ἀπλῶς ὅσα αὐτὰ ἀλλήλοις μὴ συναναιρεῖται, τούτων τὸ μὲν συναναιροῦν πρότερόν ἐστι, τὸ φύσει δὲ συναναιρούμενον ὕστερον· οἷον τῆς μονάδος ἀναιρεθείσης ἡ δυὰς ἀναιρεῖται καὶ πᾶς ἀριθμός, δυάδος δὲ ἀναιρεθείσης οὐδὲν κωλύει μονάδα εἶναι· πρότερον τοίνυν τῇ φύσει μονὰς δυάδος. This is cited as a parallel only, for we do not know whether or not the other doctrines of this chapter of the *Divis. Aristot.* are the same as those of Speusippus. Cf. Cherniss, I, pp. 44-46.

20-21 εἰ . . . συμπεραίνων. Not "unless the even were joined with it" (Thomas), but "unless the closing number (sc. of the decad) were even." On this and on the relation to Greek mathematical terminology cf. Einarson, *AJP* 57 (1936), pp. 151-152.

21-22 ἔτι . . . συνθέτους. The second property of the decad is that the prime and incomposite numbers in it are as many as the secon-

dary and composite: 1-2-3-5-7; 4-6-8-9-10. It is clear then that $\pi\rho\omega\tau\omicron\iota$ καὶ ἀσύνθετοι = "prime and incomposite," δεύτεροι καὶ σύνθετοι = "secondary and composite numbers." The passage is noteworthy in that it implies that one and two are prime numbers (cf. on lines 18-22 *supra*) and that even numbers are included among the secondary and composite. In respect to both points the passage is at variance with Nicomachus and other Neopythagorean writers, something that has escaped Tannery, *Mém. Sc.*, I, p. 287, n. 9, "L'expression technique de nombre *second* (δεύτερος) pour composé, par opposition à *premier*, expression maintenant hors d'usage, se retrouve chez les auteurs grecs postérieurs, exemple Nicomaque." According to Nicomachus (*Intr. Arith.* I, 11, 1), however, prime number is a class of odd number only, and the same thing is also true of the secondary and composite. (On the deficiency of Nicomachus' classification cf. Heath, *Hist. Gr. Math.*, I, pp. 70-74, *Euclid's Elements*, II, pp. 284-287, D'Ooge, Robbins, and Karpinski, *Nicomachus of Gerasa, Introd. to Arith.*, pp. 192, n. 2 and 201, notes 1 and 2.) Speusippus' conception of composite number is the same as that of Euclid, *Elem.*, VII, Def. 14.

It is clear from these lines that Speusippus is here considering number from a purely arithmetical point of view, since the secondary and composite numbers are obviously the product of two numbers, whereas when he discusses the figurate numbers (cf. lines 5-7 *supra* and 33-36 *infra*) three, though a prime number, is the first plane, etc. (cf. on lines 5-7 and 5-6 *supra*). Speusippus does not mention any third kind of number.

22 πρώτους. In view of the context (cf. on lines 18-22 and 21-22 *supra*) it ought to be obvious that $\pi\rho\omega\tau\omicron\iota$ here means "prime numbers;" yet Krämer, *Ursprung*, p. 409, n. 128 makes the appalling statement that $\pi\rho\omega\tau\omicron\iota$ here does not mean prime numbers "sondern bezeichnet die ungeraden Zahlen unter einem besonderen Aspekt . . ." On $\pi\rho\omega\tau\omicron\varsigma$ ἀριθμός = "prime number" cf. Aristotle, *Anal. Post.* 73 A 40, *Topics* 157 A 39-B 1.

συνθέτους. Cf. Aristotle, *Anal. Post.* 73 A 40, *Metaphysics* 1020 B 4-6.

22-26 δ . . . ἔχει. The fact that ten is the smallest number that has an equal number of prime and composite numbers in it, gives

it a certain perfection (τέλος τι), for it is the *πυθμήν* of all such numbers. Since of numbers greater than ten only twelve and fourteen have this property, and since Speusippus says *πλείων δὲ τάχα*, the words *καὶ γὰρ καὶ ὁ ιβ' καὶ ἄλλοι τινές* (sic!) almost certainly were not written by him. They may be a gloss that crept into the text (so apparently Tannery, *Mém. Sc.*, I, p. 287, n. 10, who proposes to excise them) or they may be due to the excerptor himself, in which case they may be kept as a parenthetical remark of his which does not belong to the quotation from Speusippus.

24 πυθμήν. This concept is almost defined by the words *καὶ πρῶτος τοῦτο ἔχων καὶ ἐλάχιστος τῶν ἐχόντων* (line 25). For this sense of *πυθμήν* cf. Plato, *Republic* 546 C 1, who, however, uses it of ratios, as do Nicomachus, Theon, and others (cf. D'Ooge, Robbins, and Karpinski, *Nicomachus of Gerasa, Introd. to Arith.*, p. 216, n. 1). For a different use of the word in Greek mathematics, cf. Heath, *Hist. Gr. Math.*, I, pp. 115-117.

26-27 καὶ . . . ὥφθαι. Though the second property of ten is not peculiar to it (cf. lines 21-26), the fact that ten is *πυθμήν* is considered by Speusippus to be an *ἰδιὸν πῶς*.

27-31 ἔχων . . . δεῖ. This new property of ten follows from the previous one (that it has an equal number of prime and of composite numbers), for then it also has an equal number of submultiples and multiples: 1-2-3-5; 6-8-9-10. Seven and four are excluded; the former because it is not the multiple of any number; the latter because it is the submultiple of eight and the multiple of two. Tannery, *Mém. Sc.*, I, pp. 283 and 287, n. 12, followed by de Falco (in his crit. app.) and Timpanaro Cardini, *Pitagorici*, II, pp. 132-133, thinks that in the case of four we must supply *<προσθετέον>*, that is to say that four must be added because it is both the multiple of two and the submultiple of eight. This proposal is impossible, however, because Speusippus says that the submultiples are the numbers from one to five and the multiples the numbers from six to ten (lines 28-30). We must therefore remove the comma after *ἐξαιρετέον* (cf. Dodds, *CR* 37 [1923], p. 138). In order to save his scheme Speusippus disregards the fact that if one is counted as a submultiple, the other numbers may be counted as multiples of it (cf. Tannery, *op. cit.*, p. 287, n. 8; Thomas, *Gr. Math.*, I, p. 79, n. c).

Timpanaro Cardini's attempt (*op. cit.*, p. 133) to counter this objection with the contention that one was not considered to be a number, is certainly to be rejected, not merely because in Speusippus one is a number (cf. on lines 18-22 *supra*), but also because his argument here requires that one be a submultiple.

In line 27 Lang's addition of ἴσους is not necessary; in line 29 Lang's οἱ for τοὺς heals the passage; and in line 31 it is better to keep δεῖ, the reading of A and M, since the result clause is factual.

32-33 ἔτι . . . αὐτῷ. This property of ten consists in the fact that all the ratios between numbers are to be found in it. Speusippus specifically mentions equality, the greater, the less, and the superparticular (i.e. $\frac{n+1}{n}$, where n is any integer). In lines 28-31 he had already mentioned the multiple and the submultiple. The five categories of ratios greater than unity and the five smaller than it, the general names and the particular names corresponding to the particular numbers taken, are given by Nicomachus, *Intr. Arith.* I, 17-23 and are conveniently summarized by Heath, *Hist. Gr. Math.*, I, pp. 101-104. Tannery, *Histoire*², p. 403, n. 7 says that Speusippus here refers to the ten kinds of ratios mentioned by Nicomachus and that this passage shows that they are all ancient. He may or may not be right. But Thomas, *Gr. Math.*, I, p. 80, n. *a* wrongly ascribes to Tannery the notion that Speusippus refers to the ten kinds of proportions known to the ancients. This last contention, at any rate, contradicts the testimony of Nicomachus (*Intr. Arith.* II, 22, 1 and 28, 6) and of Iamblichus (*In Nicom. Intr. Arith.*, pp. 100, 19 ff., 113, 16 ff., and 116, 1 ff. [Pistelli]) that only six proportions and means were known from Plato to Eratosthenes and that the remaining four were added by the "moderns" (cf. D'Ooge, Robbins, and Karpinski, *Nicomachus of Gerasa, Introd. to Arith.*, p. 30). Both Moderatus (cf. Proclus, *In Timaeum*, II, p. 18, 29 ff. [Diehl]) and Nicomachus (*Intr. Arith.* II, 22-28) employed all ten forms of proportions and means. However that may be, Speusippus refers to progressions in lines 36-38 but limits himself to mentioning the arithmetical progression, though he implies that there are others.

33 εἰδῶν. = "kinds."

33-62 καὶ οἱ γραμμικοὶ . . . στερεόν. These are the properties that Speusippus probably regards as peculiar (ἰδια) to ten, since they are

not the properties of one, two, three, and four as such but of the decad as the sum of them. On the "tetractys," cf. on lines 33-36 *infra*.

33-36 καὶ οἱ γραμμικοὶ . . . ὁμογενῶν. A property of the decad is that the three kinds of "Pythagorean numbers" (cf. on lines 4-5, 5-7, 6, 6-7 *supra*), namely "linear," "surface," and "solid" numbers, are in it, for two is a line, three a triangle (the first surface, cf. also lines 38-39) and four a pyramid (the first solid, cf. also lines 38-39). These are figurate numbers, and so one is associated with the point, two with the line, three with the triangle, and four with the pyramid. Speusippus begins with one as a point because he considers one to be a number (cf. on lines 18-22 *supra*) and the point to be the principle of magnitudes (cf. on line 9 *supra* and also lines 38-39 and 61-62 *infra*).

Since one, two, three, and four when added make ten, and since these are "Pythagorean numbers," it is possible that Speusippus is here alluding to the Pythagorean tetractys. The word "tetractys" itself, however, is attested late in Greek literature (cf. LSJ, *s.v.*). The first four numbers when considered as point, line, triangle, and pyramid are the first kinds of magnitudes, and so Speusippus declares them to be the principles of all homogeneous magnitudes and of all other numbers when considered as figurate numbers (cf. ταῦτα δὲ πάντα ἐστὶ πρῶτα καὶ ἀρχαὶ τῶν καθ' ἑκάστον ὁμογενῶν; also lines 38-39 and 61-62). The fact then that the principles of all magnitudes and the elementary magnitudes themselves are found in ten when the numbers are considered as figurate numbers, is yet another perfection of the decad (cf. lines 38-40). It is also an example of what Speusippus means by ἀντακολουθία: for just as magnitudes are similar to numbers so numbers when considered as figurate numbers have properties which are primarily the properties of magnitudes (cf. also on line 9 *supra*).

Certainly Speusippus could not literally have meant to *identify* the first four numbers with point, line, triangle, and pyramid. To begin with, the wording here need not imply any such identification, and he later speaks of magnitudes as "imitating" or being similar to numbers (cf. lines 39-40 [with note *ad loc.*], 43-44, 47, 55, 58-59). We know, moreover, that for Speusippus numbers and magnitudes are different kinds of οὐσίαι, that each of them has its own peculiar ἀρχαί (cf. Aristotle, *Metaphysics* 1028 B 21-24 =

F 29a), and that the point is similar to the one but not identical with it (cf. Aristotle, *Metaphysics* 1085 A 32-34 = F 51). It is clear then that Speusippus is here making use of the Pythagorean conception of figurate numbers to put forward his own doctrines, since the early Pythagoreans conceived numbers as having magnitude (cf. on lines 4-5 *supra*). The Speusippean analogies between one, two, three, four and point, line, plane, and solid are anachronistically ascribed to the Pythagoreans by Proclus, *In Euclid.*, p. 97, 18-22, on whom *Schol. in Euclid.*, V, p. 78, 19-22 (Heiberg) depends.

34 ἐπίπεδοι. Cf. on line 38 *infra*.

στιγμή. Cf. Appendix I.

36 πρῶτα καὶ ἀρχαί. Cf. lines 38 (πρῶτα) and 61-62 (ἀρχή). In view of the context here and in lines 38-39 and 60-62 (on this last passage cf. comm. *ad loc.*), these words mean "first" (sc. of their kind) and "principles" (sc. of those of their kind). But ἀρχή in Speusippus does *not* mean "element" in the strict Aristotelian sense of the word (cf. pp. 32-47 *supra*).

36-38 καὶ ἀναλογιῶν . . . δέκα. Another perfection of the decad is that in the numbers one, two, three, four, the sum (τέλος) of which is ten, we find the first progression, namely the arithmetical. Speusippus by calling it πρώτη considers it to be the fundamental one. The fact that he considers one to be the first number and the priority of odd to even (cf. on line 20 *supra*), as well as his desire to find yet another perfection in ten, explain Speusippus' choice here. But in this he is at variance with the ancients generally and with Plato in particular who consider that the first and fundamental proportion⁷² is the geometrical. In fact Plato uses ἀναλογία by itself in the sense of "geometrical proportion" and implies that it is the

⁷² The word ἀναλογία means, among other things, "proportion" and "progression," but for our purposes here it is not necessary to discriminate between these two meanings. (For a different use of ἀναλογία cf. on line 9 *supra*.) We may also disregard the fact that, strictly speaking, an arithmetical progression of four numbers should not be called ἀναλογία, because in practice it was called so (cf. Aristotle, *Eth. Nic.* 1106 A 35-36 with Burnet's note *ad loc.*). On the question of this terminology in general cf. Heath, *Euclid's Elements*, II, pp. 292-293 and D'Ooge, Robbins, and Karpinski, *Nicomachus of Gerasa, Introd. to Arith.*, p. 264, n. 2.

fundamental one (cf. *Timaeus* 31 C 2-32 C 2; cf. also [Plato], *Epinomis* 990 E 1-991 A 1; Tarán, *Academica*, pp. 331-332, 335-337, and 338 with references).

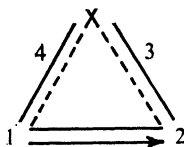
38-62 ἐν τε . . . στερεόν. Having discussed the “arithmetical” properties of the number ten in lines 14-38, Speusippus now tries to illustrate the “presence” of ten in magnitudes. He deals with planes and solids, as there are no ostensible characteristics of points and lines as such that may be connected with ten. In the extant fragment, within planes he limits his discussion to triangles, and within solids to pyramids, which are respectively the first plane and the first solid (cf. lines 35-36 and 38-39).

This passage falls into two distinct parts: (a) lines 38-43 and (b) lines 43-62. In the former Speusippus argues for the “presence” of ten both in the triangle as such as in the pyramid as such. In the latter he examines these figures (σχήματα) from the point of view of number. By this he means that if one determines how each of the several kinds of triangles resembles a different number, and similarly with pyramids, one discovers in different kinds of pyramids the “presence” of the number ten, since the four kinds of pyramids are respectively assimilated to one, two, three, and four. Some of the analogies are arbitrary, as will be pointed out in some of the notes that follow. But it is noteworthy that this whole passage illustrates Speusippus’ use of the principle of ὁμοιότης and also his method of treating the different οὐσίαι on the basis of the ιδιότης αὐτῶν καὶ πρὸς ἄλληλα κοινότης, ἀναλογία τε καὶ ἀντακολουθία (cf. on lines 8-9, 9, and 33-36 *supra*).

38-43 ἐν τε . . . δέκα. Point, line, triangle, and pyramid are first (πρῶτα) among planes and solids because the triangle is the first plane, the pyramid the first solid, and both presuppose the line and the point (cf. lines 61-62 πρώτη μὲν γὰρ ἀρχὴ εἰς μέγεθος στιγμή, κτλ. and comm. on lines 9 and 33-36 *supra*). Since point, line, triangle, and pyramid are respectively associated with the numbers one, two, three, and four, Speusippus says that these magnitudes have (among themselves) the number ten and, hence, that they possess the perfection of the decad. In lines 40-43 Speusippus explains how ten is found in the triangle and in the pyramid themselves.

Since the number four is to be found in its angles or in its faces, and six in its sides, it is intelligible why ten is in the pyramid. Speusip-

pus' attempt to find ten in the triangle is more complicated. He seems to refer to the construction of a triangle by taking a line and a point outside it. The line has *two* extremities and between the point and the extremities of the line there are *two* intervals:



This gives the number four; and, since a triangle has three sides and three angles, we obtain six, which added to four gives ten. The construction of the triangle is not explicitly mentioned, however; and, whereas in the pyramid ten is found directly, in the case of the triangle Speusippus has to combine the triangle with point, line, and intervals (cf. Tannery, *Histoire*², p. 403, n. 11). Moreover, whereas in the case of the pyramid one counts either the angles or the faces, but not both, in the case of the triangle one counts *both* the sides and the angles.

38 ἐπιπέδοις. Here = “planes.” Speusippus also uses it with the meaning “side of a pyramid” (cf. lines 54, 56) as a loose synonym of ἐπιφάνεια (cf. lines 51, 62), which itself means “plane or surface.” In line 34 (cf. also line 7) ἐπιτεδος is used in the sense of “plane number.”

39-40 ἔχει . . . ἰσχει. This does not mean “The number ten exhibits them and possesses perfection” (Thomas), for the subject of both verbs is ταῦτα, but “and these (i.e. point, line, triangle, and pyramid) exhibit the number ten ($1 + 2 + 3 + 4 = 10$) and possess perfection.”

41 πλευραῖς. = “Sides,” sc. of a plane or solid (cf. lines 42, 59, and LSJ, s.v. III, a). Here of the latter.

43-60 καὶ μὴν . . . λεχθέντα. Speusippus now finds the number ten in four different kinds of pyramids which he associates respectively with the numbers one, two, three, and four.

Neither of the two interpretations which have been proposed in explanation of this passage is satisfactory. Tannery, *Histoire*², p. 403, n. 12, followed by Thomas, *Gr. Math.*, I, p. 81, n. e, says: "Il semble qu'il y ait, au fond de cet exposé, une conception pythagorienne mal développée. Le point, monade, est nécessairement simple; la ligne, dyade, doit avoir deux espèces, droite ou courbe; le triangle, triade, trois espèces; la pyramide, tétrade, quatre espèces; en tout 10." Timpanaro Cardini, *Pitagorici*, II, p. 135, for her part, merely says that in the case of triangles we go from one to three and in the case of solids (pyramids) from one to four. Against these two interpretations it may be said that Speusippus finds the number ten in the case of the four kinds of pyramids because they are respectively similar to one, two, three, and four, and so their sum is ten (cf. line 60 ὥστε τέλος ἐν τοῖς δέκα λαμβάνειν τὰ λεχθέντα). The reason for dealing first with the three different kinds of triangles is not hard to find: they are used in the description of three kinds of pyramids, and in each case the association of these triangles with one, two, and three plays an essential rôle in Speusippus' conception. (Against Tannery one may also say that throughout this fragment there is no evidence whatever of the association of two with line because there are two kinds of lines, the straight and the curve.)

43-44 καὶ μὴν . . . συμβαίνει. Lang's proposal to add ταῦτό before συμβαίνει, accepted by de Falco, Thomas, and others, is unnecessary. The previous sentence ends with ὥστε πάλιν δέκα; here καὶ μὴν is progressive, introducing a new point in a series and making a new departure (cf. Denniston, *Greek Particles*² [Oxford, 1954], pp. 351-352), and the second καὶ is adverbial: "and moreover also among the figures regarded from the point of view of number ten comes about." For number in σχήματα cf. Plato, *Timaeus* 53 B 4-5 οὕτω δὴ τότε πεφυκότα ταῦτα πρῶτον διεσχηματίσατο (sc. ὁ θεός) εἶδеси τε καὶ ἀριθμοῖς.

44-49 πρῶτον . . . ἐστὶ. The three triangles mentioned here, the equilateral, the half-square isosceles, and the half-equilateral, are the same as those Plato describes in *Timaeus* 54 A-B and then uses in the construction of the tetrahedron, octahedron, isocahedron, and cube. Now for Speusippus' purpose in this passage it would have sufficed to make use of the equilateral, the isosceles, and the scalene triangles; in the case of the two latter, however, he mentions

a particular kind of each. Since in the first part of his treatise he dealt with the five regular polyhedra (cf. on lines 7-8 *supra*), we may infer that his choice of triangles here has been influenced by the fact that these are the triangles used in the construction of four of the regular solids (cf. Cornford, *Plato's Cosmology*, pp. 214-215, 231 ff.), and so Speusippus probably thought that these are the three "elementary" kinds of triangles.

44-46 **πρῶτον . . . ἰσων** The equilateral triangle (ἰσόπλευρον) is declared to be the first triangle because, Speusippus implies, it resembles (cf. on line 47 *infra*) the number one. For in a certain sense (πως) the equilateral triangle has only one side and one angle, that is to say only one kind of side and only one kind of angle. Speusippus' association of one with equality is explained by the fact that two or more things which are equal to one another (in this case the sides, and the angles of the equilateral triangle) are logically and essentially one and the same, for the equal is always logically indivisible (ἄσχιστον) and uni-form, that is of one kind (ἐνοειδές). (For the association of inequality with "divisibility" cf. F 82 with comm. *ad loc.*) The equilateral triangle is mentioned by Plato in *Timaeus* 54 A 7.

45 **ἄσχιστον**. This means "logically indivisible" (cf. the previous note). In Plato, *Sophist* 221 E 6 the class of land animals is left undivided (ἄσχιστον) but not because it is logically indivisible, since the Eleatic Stranger adds that it is πολυειδές. In *Timaeus* 36 D 1 Plato uses the word of the circle of the Same, which is not "physically" divided as that of the Different is. Aristotle uses ἄσχιστον in the sense of "material or physical indivisibility" (e.g. *Meteor.* 385 A 16 and 386 B 26) and so, too, does Theophrastus (*De Igne* 72). Neither LSJ, *s.v.* nor the authors of the Supplement (1968) cite Speusippus for the meaning "logically indivisible," as they should have done.

46 **ἐνοειδές**. = "Of one kind," "essentially one" (cf. on lines 44-46 *supra*). The word does not occur either in Plato or in Aristotle. To express the same notion, however, the former uses μονοειδές (e.g. *Phaedo* 78 D 5, *Symp.* 211 B 1, E 4, *Republic* 612 A 4, *Timaeus* 59 B 2); but this last word does not occur in Aristotle, except for the pseudo-Aristotelian *Magna Moralia* 1192 A 12. (In Aristotle

we find ἐν εἶδος and ἐν εἶδει, but this is technical Aristotelian terminology.) Speusippus' preference for ἐνοειδές, whether or not he coined the word himself, is probably due to its connection with ἔν.

LSJ, s.v. list two meanings. (I) "Single," "simple," for which they cite Nicomachus, *Ench. Harm.* 12. There, however, Nicomachus says about σύμφωνα (p. 262, 4-5 [Jahn]): ὥστε ἐνοειδῇ τὴν ἐξ αὐτῶν φωνὴν γενέσθαι καὶ οἶον μίαν, and this is not exactly the same meaning as in Speusippus. (II) "Resembling, or having the form unity," a frequent meaning in the Neoplatonists, cf. e.g. Plotinus, *Enn.* VI, 9, 5, 26 (Henry-Schwyzler), where it is used of νοῦς. LSJ then should have cited Speusippus both for the first attestation of ἐνοειδές and for the meaning "of one kind."

46-47 δεύτερον . . . ὁρᾶται. The second triangle is the half-square (i.e. the right-angled isosceles), because it has one "difference" between the lines and one between the angles, that is to say that in it there are two kinds of lines and two kinds of angles. And so it is to be related to the number two.

46 ἡμιτετράγωνον. In extant Greek literature, this seems to be the first occurrence of this word to designate the right-angled isosceles. This triangle Plato describes in *Timaeus* 53 D 2-3 as ἐκατέρωθεν ἔχει μέρος γωνίας ὀρθῆς πλευραῖς ἴσαις διηρημένης, and then calls simply ἰσοσκελές (54 B 4).

47 παραλλαγῆν. Here = "difference" (cf. on line 57 *infra*) rather than "variety," "variation" as LSJ, s.v. III think. In either case, since the word occurs in the verbatim quotation from Speusippus, he should have been cited before Theophrastus (not as "*Theolog.*"), for in all probability his work is earlier than that of the latter.

ἐν δυάδι ὁρᾶται. Speusippus means that if one tries to see to which numbers are related the different kinds of triangles (that is, looking at the triangles from the point of view of number, cf. lines 43-44), the half-square is related to the number two. Cf. lines 55 ὥστε ἐκ τούτου δυάδι ἐοικέναι, and 58 ὥστε τριάδι ἂν ὁμοιοῖτο.

47-49 τρίτον . . . ἐστίν. The third triangle, the half-equilateral, has three sides of different lengths and three different angles. Its elements being three, it is to be related to that number. Speusippus' description of this triangle as τὸ τοῦ ἰσοπλεύρου ἡμισυ is essentially the same as Plato's; cf. *Timaeus* 54 A 7 ἐξ οὗ τὸ ἰσόπλευρον τρίγωνον

ἐκ τρίτου συνέστηκεν and 54 B 4-5 τὸ δὲ τριπλῆν κατὰ δύναμιν ἔχον τῆς ἐλάττονος τὴν μείζω πλευρὰν ἀεί.

48 ἡμιτρίγωνον. First attested here, cf. LSJ, s.v.

49-50 καὶ . . . ψαύει. Lang's emendation προϊόν for the MSS' προϊών (accepted by de Falco and others) is not necessary. One must take ἄχρι τῶν τεττάρων with the preceding words, not with the following participle as most interpreters do: "And in the case of solids, if you go on in such a way (i.e. seeing how each figure resembles a given number), you will discover up to four (sc. different kinds of figures), so that also in this way one reaches the decad" (and not merely in the pyramid as such, cf. lines 40-41 *supra*).

50-60 γίνεται . . . λεχθέντα. Speusippus here manages, but not without recourse to some arbitrary procedures, to find four kinds of pyramids which, because of their characteristics, he associates respectively with the numbers one, two, three, and four, the sum of which is ten.

50-55 γίνεται . . . ὁικέναι. Before de Falco's edition there was a lacuna in the text, since in M and in all the MSS of the β family lines 52-54 read: ἰσότητι ἔχουσα παρὰ τῆς ἐπὶ τῆς βάσεως γωνίας, κτλ. Critics had proposed different supplements (cf. de Falco's crit. app. *ad loc.*), which the reading of A (adopted by de Falco) renders obsolete, for it shows that in the exemplar of the β family there was an omission due to homoeoteleuton (ἔχουσα . . . ἔχουσα [lines 52-53]). Following Oppermann, *Gnomon* 5 (1929), p. 546, I have placed a comma after ἔχουσα in line 53 and removed that which de Falco places after γωνίας in line 54. But the addition of δέ after τὴν in line 54 (Lang, followed by Oppermann) seems to me to be unnecessary (cf. de Falco, *Riv. Filol.* 64, N.S. 14 [1936], p. 375).

50-52 γίνεται . . . ἰσταμένη. The first pyramid is that which has an equilateral triangle as its base and three equilateral triangles as sides; hence in a sense (πῶς) it has only one (kind of) line and one (kind of) face or plane. Here, too, as in the case of the equilateral triangle (cf. on lines 44-46 *supra*) unity is due to equality (ἐν ἰσότητι

ἔχουσα), and so this pyramid (i.e. the regular tetrahedron) is associated with the number one.⁷³

51 ἐπιφάνειαν. Cf. on line 38 *supra*.

52-55 ἡ . . . εἰκέναι. The second pyramid has a square as its base and four triangles as sides. Since there are two kinds of planes in it, this pyramid has one difference in that its solid angle at the vertex is enclosed by four planes, whereas the solid angles at the base are each enclosed by three planes. Because of this one difference (= two) it is similar to a dyad, i.e. to the number two. As Tannery, *Histoire*², p. 403, n. 12 points out, Speusippus here is inconsistent, for, to maintain the analogy with the triangles (lines 44-49), he ought to have classified the pyramids according to their solid angles into (a) that in which all the angles are equal, (b) that in which three angles are equal, (c) that in which two angles are equal, (d) that in which all angles are unequal. But even apart from the fact that he has chosen special cases of pyramids, Speusippus has taken the second pyramid with a square as its base.

ἡ . . . συγκλειομένη. The only translator who attempts to render δύο is Maddalena, *Pitagorici*, p. 176: "La seconda costruita su di un quadrato, si esprime col numero due, perché, avendo una sola differenza . . ." But "si esprime" cannot be supplied from the context and, moreover, Speusippus says that the second pyramid δυάδι εἰκέναι (line 55). We must supply a verb and an object from ἐπιφάνειαν . . . ἔχουσα in lines 51-52: "The second pyramid, built on a square, has two (kinds of planes), etc."

⁷³ Nothing in the text of F 28 justifies the contention of Isnardi Parente³, p. 1033, n. 33 that in it "il tetraedro regolare sia in definitiva richiamato non al 4 ma all'Uno: il che vuol dire che la figura geometrica per ecellenza perfetta è richiamata al principio e vista come l'ἀνάλογον di esso in un diverso piano dell'essere." Neither Tannery, *Histoire*², p. 402 (= p. 388 of the first edition) nor Michel, *De Pythagore à Euclide* (Paris, 1950), p. 683, cited by Isnardi Parente, say anything that could have misled her. When Speusippus tries to find the number ten in the several *kinds* of figures (cf. on lines 38-62 and 43-60 *supra*), he assimilates the equilateral triangle and the regular tetrahedron to *the number one*, cf. lines 44-46 and 50-52 and n.b. in both passages the expression μίαν πως. And Speusippus is also able to find the number ten in *any* triangle and in *any* pyramid (cf. lines 40-43). But the pyramid as such, i.e. *any* pyramid, is assimilated to the number four (cf. lines 33-36 and 38-40).

53 παραλλαγήν. Cf. on line 47 *supra*.

54 επιπέδων. Cf. on line 38 *supra*.

κατὰ κορυφήν. Speusippus should have been cited by LSJ, *s.v.* κορυφή I, 4 for the meaning “(angle) at the vertex.”

55 δαδὶ εἰκέναι. For Speusippus’ conception of “resemblance” or “imitation,” which is different from Plato’s cf. p. 60 f. *supra*. On his indiscriminate use of the cardinal numbers and the abstract ones cf. p. 16, n. 78 *supra*.

55-59 ἡ . . . πλευρᾷ. The third pyramid resembles a triad (i.e. three) because in it we find two differences: its base is the half-square isosceles triangle in which there is one difference (cf. on lines 46-47 *supra*); the other difference corresponds to the angle at the vertex (situated on the plane perpendicular to the middle of the hypotenuse) in respect to all the other angles. “Cette troisième pyramide, qui a pour base le *demi-carré*, est obtenue en coupant la seconde pyramide par un plan passant par le sommet et par une diagonale de la base carrée” (Tannery, *Histoire*², p. 404, n. 15).

56 επιπέδω. Cf. on line 38 *supra*.

57 διαφορὰν. = “Difference,” in the most general sense and, as the context indicates, equivalent in meaning to παραλλαγή in line 47 (cf. *ad loc.*).

κορυφαίας. Cf. on line 54 *supra*.

59 πλευρᾷ. Cf. on line 41 *supra*.

59-60 τετράδι . . . συνισταμένη. The fourth pyramid resembles a tetrad (i.e. four) in a similar way (κατὰ ταύτά), that is to say on the same reasoning according to which the third pyramid was shown to resemble a triad. Since Speusippus here mentions only the fact that the base of this pyramid is the half-equilateral triangle (the reading of the MSS, ἡμιτετραγώνω, is clearly wrong, for it is the third pyramid that has the half-square triangle for base), he implies that we find the number three in the three different sides and angles of this triangle and that the additional difference which causes him

to connect this pyramid with four is given by the angle at the vertex. "Cette quatrième pyramide a pour base le type du triangle scalène, et l'on peut d'ailleurs supposer que, dans celle-là comme dans les précédentes, les arêtes allant du sommet à la base sont égales. On l'obtiendrait donc en coupant en deux parties égales le tétraèdre régulier par un plan bissecteur de l'un de ses angles dièdres" (Tannery, *Histoire*², p. 404, n. 16).

60 ὥστε . . . λεχθέντα. The four pyramids described in lines 50-60, since they have been assimilated respectively to the numbers one, two, three, and four, find their completion (i.e. their sum) in the number ten. Cf. line 38 τέλος δὲ ἔχουσα ἐν τοῖς δέκα.

60-62 τὰ αὐτὰ . . . στερεόν. Also in the generation of magnitudes we find the number ten, for the first principle of magnitudes is the point (one), the second is the line (two), the third is the surface (the triangle being the first surface [three]), the fourth is the solid (the pyramid being the first solid [four]), the sum of which is ten. Cf. lines 33-36 and 38-40 with the corresponding notes. According to Speusippus the ῥύσις of the point generates the line (cf. F 52 *infra*), that of the line generates the plane, and presumably that of the plane generates the solid. This "generation," however, must be understood in a metaphorical sense, since Speusippus thought that magnitudes are eternal οὐσίαι which have separate existence (cf. F 72-74 with comm. *ad loc.* and pp. 55-56 *supra*).

62 ἐπιφάνεια. Cf. on line 38 *supra*.

1-62 Ὅτι . . . στερεόν. This fragment of Speusippus is extant only in the *Theologoumena Arithmeticae*, an anonymous work of uncertain date which has been transmitted in several MSS, none of which is earlier than the fourteenth century. Since the questions of the authorship, of the composition, and of the sources of this work affect our understanding of Speusippus' F 28, it is necessary to discuss them briefly. Two ancient authors, who have influenced the extant *Theologoumena*, wrote works of this kind with the same—or similar—titles: Nicomachus of Gerasa and Iamblichus of Chalcis.

Nicomachus' book is not extant. It is referred to in an anonymous *Prolegomena* to Nicomachus' *Introduction to Arithmetic*, extant in the *Codex Parisinus Graecus* 2372, folios 54-56 and published by

Tannery, *Diophanti Opera Omnia*, II (Lipsiae, 1895), pp. 73-77. The pertinent passage is p. 76, 20-24: δεῖ δὲ τὸ βιβλίον τοῦτο (sc. the *Introduction to Arithmetic*) προαναγνῶναι ἅτε εἰσαγωγικὸν ὃν, πεποιεῖται γὰρ τῷ Νικομάχῳ ἑτέρα ἀριθμητικὴ, ἣν Μεγάλην Ἀριθμητικὴν ἦτοι Θεολογούμενα ἐπιγράφει, ἐν ἣ μέμνηται τούτου τοῦ βιβλίου· ὅθεν καὶ τὸ γνήσιον τῇ τάξει συναποδέδεικται. A résumé of Nicomachus' *Theologoumena* is given by Photius in *Codex* 187 of his *Bibliotheca* (III, pp. 40-48 [Henry] = pp. 142 B 15-145 B 7 [Bekker]).⁷⁴ The work is quoted several times in the extant *Theologoumena* with specific ascription of passages to Nicomachus' own *Theologoumena*, called either by this name or by that of Ἀριθμητικὴ. Often, however, the author of the *Theologoumena* or his source has used Nicomachus' work in excerpts and summaries, but in them he mentions him by name only once.

Iamblichus, for his part, himself refers to his own *Theologoumena*. He wrote, or at any rate intended to write, a work in ten parts called Συναγωγή τῶν Πυθαγορείων δογμάτων. The first four treatises are extant: 1) *De Vita Pythagorica Liber*; 2) *Protrepticus*; 3) *De Communi Mathematica Scientia Liber*; 4) *In Nicomachi Arithmetica Introductionem Liber*. Toward the end of the last mentioned work Iamblichus refers to the six treatises still to come (*In Nicom. Arith. Intr.*, p. 125, 14-25 [Pistelli]): works on 5) the physical; 6) the ethical; and 7) the theological properties of the first ten numbers (cf. p. 125, 19-22 καὶ ὅσα δὲ ἄλλα ἐπανθεῖ τοῖς ἀπὸ μονάδος μέχρι δεκάδος ἀριθμοῖς κατὰ τὸν φυσικὸν λόγον καὶ τὸν ἠθικὸν καὶ ἔτι πρὸ τούτων ⁷⁵ τὸν θεολογικὸν κατατάξαντες συμφιλολογήσομεν, κτλ.); 8) an introduction to Music; 9) one to Geometry; and 10) one to Sphaerics (probably Astronomy is meant). That Iamblichus did in fact write a "Theologoumena" is guaranteed by a statement of Syrianus where, *à propos* of the "theological" aspect of numbers, he says (*In Metaph.*, p. 140, 14-15 [Kroll]): σαφέστατα δὲ ὁ θεὸς Ἰάμβλιχος

⁷⁴ In his *Intr. Arith.* II, 14, 5 (p. 104, 1-4 [Hoche]) Nicomachus says ἵνα δὲ μὴ ἀνήκοι ὦμεν κολούρων καὶ δικολούρων καὶ τρικολούρων πυραμίδων, ὧν τοῖς ὀνόμασιν ἐντευξόμεθα ἐν συγγράμασι μάλιστα τοῖς θεωρηματικοῖς, κτλ. In their commentaries on Nicomachus, Asclepius and Philoponus interpret the underlined words as a reference to some sort of *Theologoumena* such as Nicomachus himself wrote, and their interpretation has been adopted by Tannery, *Mém. Sc.*, II, pp. 188-189. The words in question need not be taken to refer to such a work, however (cf. Tarán, *Asclepius on Nicomachus*, p. 80).

⁷⁵ On πρὸ τούτων here = "above all" cf. B. D. Larsen, *Jamblique de Chalcis. Exégète et philosophe*, I (Aarhus, 1972), pp. 45-46 with n. 66.

ἐν ἑβδόμῃ βίβλῳ τῆς τῶν Πυθαγορείων δογμάτων συναγωγῆς. Syrianus then must have known the Iamblichean "*Theologoumena*."

In the extant *Theologoumena* the only other ancient author frequently cited and quoted in the same way as Nicomachus is is Anatolius, whose treatise *Περὶ δεκάδος καὶ τῶν ἐντὸς αὐτῆς ἀριθμῶν* is extant.⁷⁶ In this case then we have an idea of the methods used by the author of our *Theologoumena* or by his source in citing and in excerpting his sources.

The *Theologoumena Arithmeticae* consists to a large extent of a series of citations from the treatises of Nicomachus and of Anatolius mentioned above. There are in addition a series of passages which have been excerpted from Nicomachus, from Anatolius, and perhaps also from other works either by the author of the extant *Theologoumena* or by his source or sources. These passages are of a different nature from the direct quotations of Nicomachus and Anatolius in that they show reelaboration by the excerptor and also in that the names of Nicomachus and of Anatolius more often than not have been omitted. Finally, the long excerpt on Speusippus (= F 28) is in itself a special case. Some scholars think that the extant *Theologoumena*, even in its present state, goes back to Iamblichus; others emphatically deny it, and contend that the very fact that the work is merely a series of extracts and of citations of Nicomachus and Anatolius is an indication that Iamblichus is not the author of the work that has come down to us, since Iamblichus does not cite his sources as the *Theologoumena* does (cf. Larsen, *op. cit.* in note 75 *supra*, pp. 43-44 and n. 54 with references). Since we can ascertain which passages have been borrowed from Anatolius, and since Nicomachus is the only other author explicitly cited as a source, de Falco ("Sui 'Theologoumena Arithmeticae,'" *Riv. Indo-Grec.-Ital.* 6, Fasc. I-II [1922], pp. 49-61; cf. also his "Sui tratatti aritmo-logici di Nicomaco ed Anatolio," *ibid.*, fasc. III-IV, pp. 51-60) came to the conclusion that, with the exception of pp. 1, 1-3, 1 and perhaps also p. 7, 3-13, whatever is not from Anatolius must come from Nicomachus and that the authorship of the work is ultimately Iamblichean. This neat solution will not do, however, as Oppermann has demonstrated in his review of de Falco's edition (*Gnomon* 5 [1929], pp. 545-558, esp. 548-558), where he develops a more

⁷⁶ Cf. Heiberg's edition in *Annales internationales d'histoire*. Congrès de Paris 1900. 5e Section. *Histoire des Sciences* (Paris, 1901), pp. 27-41.

promising line of approach to this problem. He maintains that the starting point must be a comparison of the extant treatise by Anatolius with the *Theologoumena* and shows that the latter often cites and excerpts Anatolius but does not always copy from him mechanically. This approach is then extended to the rest of the work which is shown to be a series of citations and excerpts made in such a way as to avoid repetitions, contradictions, and inconsistencies. Oppermann therefore infers that the *Theologoumena* is not merely a series of citations and extracts from Nicomachus and Anatolius but that between it, on the one hand, and the treatises of Nicomachus and Anatolius, on the other, stands a unified work which was the source of the excerpts that are not merely quotations from these two authors. This additional source of the extant *Theologoumena* is, according to Oppermann, the lost *Theologoumena* of Iamblichus, for in three passages (*op. cit.*, pp. 556-558) he detects the presence of Iamblichus: once within an extract from Nicomachus, once within a summary of Anatolius, and in p. 1, 18 (de Falco), where he takes ὥς ἐν τῇ Εἰσαγωγῇ ἀποδεδείχται as a reference to Iamblichus' *In Nicom. Arith. Intr.*

What seems to be valuable in Oppermann's discussion is his demonstration that the extant *Theologoumena* consists of a series of citations and excerpts which have not been done mechanically but rather with the aim of producing an unified work. That Iamblichus' own *Theologoumena* was also one of the sources of our treatise is probable enough.⁷⁷ But that Oppermann's interpretation is difficult to accept without substantial modifications is shown by his own conclusion (cf. *op. cit.*, p. 558): the *Theologoumena Arithmeticae* is a series of running excerpts from Iamblichus, Nicomachus, and Anatolius; Iamblichus himself used Nicomachus and Anatolius as sources, but the author of the extant *Theologoumena* also made direct use of Nicomachus' and Anatolius' treatises, as well as of Iamblichus'. The difficulty here is that whereas the *Theologoumena* often mentions Nicomachus' and Anatolius' names it does not cite Iamblichus even once. This omission might be explained on the assumption that Iamblichus is the author of the extant *Theologoumena*; but Oppermann denies this, and rightly so, for the work as

⁷⁷ But it is not certain, for in the three passages where Oppermann detects the presence of Iamblichus the work cited or used in his *In Nicom. Arith. Intr.*, and it is not impossible that the use of Iamblichus in these excerpts may be due to someone else and not to Iamblichus himself.

it stands is completely at variance with the way Iamblichus mentions his sources—when he mentions them at all—and with the way he quotes from them. Moreover, if Iamblichus is the author, how are we to explain the fact that we have long citations from Nicomachus and Anatolius and that at the same time these two authors are cited in the more elaborate passages which do not as such come from them? Nor is it possible to suppose that Iamblichus is the author of the extant *Theologoumena* but that he did not prepare the work for publication. Even Oppermann's analysis of the quotations and excerpts shows that if the treatise lacks the elaboration of a "published" work, it lacks it throughout and not merely towards the end of it. And the fact that the excerpts which show elaboration occur in several different places preceded and/or followed by the citations from Nicomachus and Anatolius also tells against this last hypothesis.

A few inferences can now be drawn. First, that the three passages where Oppermann has detected the presence of Iamblichus' *In Nicom. Arith. Intr.* probably go back to him and may even go back to his *Theologoumena* (cf. however note 77 *supra*). Some of the other passages that show reelaboration may also go back to Iamblichus, though this is far from certain. Second, the presence of Iamblichean excerpts in the extant *Theologoumena* does not prove that Iamblichus' homonymous work was available to its author. In fact, in view of the passages specifically ascribed to Nicomachus and to Anatolius and in view of Iamblichus' own use of these two authors, the total absence of Iamblichus' name is some evidence that the author of our treatise did not have direct access to Iamblichus' *Theologoumena*. Third, the only reasonable inference concerning the nature of this treatise (which could be further supported by a complete analysis of it and of the parallel arithmological passages) is that its author is not ultimately Iamblichus but someone else unknown to us who is probably much later than Iamblichus. This man made a series of excerpts from Nicomachus, Anatolius, and other arithmological treatises. Some of these works must have been anonymous—particularly so that of Iamblichus, if it was available to him—and may have been of a purely doxographical nature, where the immediate sources were not named (somewhat similar to Psellus' *De Omnisfaria Doctrina*, for example). It is uncertain whether the work as we have it has suffered serious damage in transmission or whether the author died before he had time to

prepare it for publication. But however that may be, the direct citations from Nicomachus and from Anatolius suggest that the extant *Theologoumena* is the work of a Byzantine excerptor⁷⁸ who selected his material with the intention of avoiding repetitions, contradictions, etc. but probably without planning ever to produce a more unified and elaborate work than the one we have.

For our own purposes here, it is important to keep in mind that the *Theologoumena* is a series of excerpts made from several sources, the identity of at least three of which we know. In the *Theologoumena* the chapter about the decad has been made up of three excerpts: (a) pp. 79, 4-82, 10, which ultimately probably comes from Nicomachus; (b) pp. 82, 10-85, 23, the passage about Speusippus; (c) pp. 86, 1-87, 11, which has been taken from Anatolius. Who then is the author of the excerpt on Speusippus? Oppermann's assertion (*op. cit.*, p. 555) that this whole text comes from Speusippus is of course impossible, since Speusippus obviously cannot be the author of the introductory statement with the résumé of the whole contents of his treatise. It is very probable that the author of the *Theologoumena* took the whole passage, that is, both the introductory statement (F 28, lines 1-14) and the verbatim quotation (lines 14-62), from a single source, for it is highly improbable that Speusippus' book was still available to him. Moreover, the fact that the summary of the whole treatise is followed by a lengthy verbatim quotation is not in agreement with the "methods" of the anonymous author of the *Theologoumena*. Burkert, *Lore and Science*, pp. 69 and 246, n. 39 thinks that the author of the whole excerpt on Speusippus is either Nicomachus or Iamblichus, while Merlan, *From Platonism*², pp. 53 and 103 maintains that the source is Iamblichus. (Other scholars, too, ascribe F 28 to Iamblichus or to Nicomachus.) It is more probable than not, however, that the source of F 28 is neither Nicomachus nor Iamblichus. Both the introductory summary of Speusippus' treatise and the lengthy quotation from it, the latter of which deals with purely mathematical properties of the decad, are not in keeping with what we know of Nicomachus' methods in general and of the contents of his *Theologoumena* in particular. In

⁷⁸ Nicomachus' *Theologoumena* was still available to Photius, and Anatolius' treatise has come down to us, so that it is not impossible that a late Byzantine excerptor is the author of our treatise. He may have wished to make a collection of excerpts from several arithmological treatises, and it is noteworthy that the work as we have it has the character of a cento.

this work Nicomachus seems to have been exclusively concerned with the purely "theological" properties of the first ten numbers. For similar reasons Iamblichus must also be excluded, for he neither summarizes nor quotes his sources in this way. It is noteworthy, for example, that when in pp. 76, 6-77, 3, a passage which seems to come from Iamblichus,⁷⁹ doctrines peculiar to Xenocrates are mentioned (cf. Cherniss, *AJP* 68 [1947], p. 244, n. 86, esp. p. 246 with references = *Selected Papers*, pp. 195-197, esp. p. 197), Xenocrates' name does not occur at all. The long quotation from an author as early as Speusippus and the summary of his whole treatise are unique in the extant *Theologoumena*, where long quotations are explicitly ascribed only to Nicomachus and Anatolius. The lengthy verbatim quotation from Speusippus is also different from the short quotations of Pythagorean and other pseudepigraphical works which occur in the *Theologoumena*. In short, we can be certain that the whole excerpt (cf. on line 1 *supra*) on Speusippus is not by Anatolius. In all probability it is not due to Nicomachus or to Iamblichus, either. We must suppose that this whole text is by an author unknown to us, who was in strong sympathy with Neopythagoreanism (cf. on lines 2-4 *supra*), and that the excerpt probably reached the author of the *Theologoumena* through one or more intermediate sources rather than directly.

Whoever the author of the excerpt on Speusippus may have been, however, there is no reason to question the authenticity of this text, as Saffrey, *Le Περὶ φιλοσοφίας δ' Aristote et la théorie platonicienne des idées nombres* (Leiden, 1955), p. 40, n. 2 does. His arguments are: (a) the title *Περὶ Πυθαγορικῶν ἀριθμῶν* is not found in the list of Speusippus' writings; (b) the doctrine of the fragment is Philolaic; (c) the insistence with which the reporter praises ("vante") his source is at least suspect (cf. lines 2-4), for this passionate exclusivism for Pythagorean doctrines is not Speusippus', but, as the word ἀεί suggests, that of a whole group of philosophers, the

⁷⁹ Pace Oppermann, *op. cit.*, p. 555, we have Nicomachus through Iamblichus from p. 77, 4 to p. 78, 13; but pp. 76, 6-77, 3 seem to come from Iamblichus; and if Iamblichus had a source also for this passage, that source probably was not Nicomachus. Note that pp. 76, 6-77, 3 is of a different character from pp. 77, 4-78, 13. The latter passage probably comes from Nicomachus, for it is similar in nature to other passages which come from him, as can be corroborated with the testimony of Photius about Nicomachus' *Theologoumena*. For these very reasons, pp. 76, 6-77, 3 can hardly come from him. We must also note the typical Iamblichean transition to the Nicomachean part made with the words καὶ διὰ τοῦτο (p. 77, 3-4).

Neopythagoreans. Saffrey contends that the work "On Pythagorean Numbers" originated in Neopythagorean circles and that it was later ascribed to Speusippus. To reject this interpretation one may say, in the first place, that the list of Speusippus' writings is not complete (cf. on T 1, lines 35-65 *supra*) and that the title "On Pythagorean Numbers" need not even go back to Speusippus himself (cf. on lines 2-4, 4-5, and 7-8 *supra*). Second, the doctrines both of the introductory summary and of the verbatim quotation are, more often than not, neither those of Philolaus nor those of the early Pythagoreans, and are often incompatible with early Pythagoreanism (cf. on lines 7-8, 8-9, 9, 9-14, 18-22, 21-22, 33-36 *supra*). Third, some of these doctrines are elsewhere attested for Speusippus (cf. on lines 8-9, 9, 18-22, 33-36, 60-62 *supra*). Fourth, part of the introductory summary presupposes the terminology and some doctrines of Plato's *Timaeus* (cf. esp. on lines 11-12 and 13-14 *supra*). Fifth, the prejudice in favor of Pythagorean doctrines in lines 2-4 is in all probability to be ascribed to the author of the summary himself and not to Speusippus (cf. note *ad loc.*), but there is no reason to question the reliability of the résumé of Speusippus' treatise in lines 5-14. For reasons similar to those given above one may reject the view of Burkert and others (cf. on lines 7-8 and 15-17 *supra*) that Speusippus explicitly ascribed to the Pythagoreans all the doctrines he put forward in this work. His treatise was certainly not of a historical nature, and there is evidence that he made use of certain Pythagorean doctrines merely as a way of putting forward, and of finding a precedent for, doctrines of his which are notoriously inconsistent and incompatible with essential tenets of early Pythagoreanism (cf. further on F 61a-b *infra* and p. 109 *supra*).

This is the only extensive verbatim quotation from Speusippus. The style is simple. Hiatus is not avoided. The main sentences are united in the manner Aristotle calls λέξεις εἰρομένη. Within them subordination is usually accomplished by means of purpose and of result clauses. But it would be unwarranted to infer that this fragment is a significant sample of Speusippus' style. The very nature of the treatise and the fact that it was a short work (cf. on lines 2-4 and 4-5 *supra*) may have influenced the choice of style here, and we have very little additional evidence (cf. F 4 and perhaps F 24) to draw any general conclusions concerning this matter.

F 29a

Context. The second chapter of *Metaphysics Z* (1028 B 8-32) is devoted to a brief review of the different *kinds* of οὐσία Aristotle's predecessors had posited. This is to serve as background for his own investigation of the primary meaning of οὐσία, and it is well to keep in mind that, whatever additional meaning he gives to it, Aristotle takes it for granted that οὐσία is that which has separate existence.⁸⁰ The most notorious οὐσίαι are the physical substances (1028 B 8-13). We must next determine whether these are the only substances or whether there are also others, that is whether there are also non-physical substances (1028 B 13-15).⁸¹

Some think that the limits of body, such as surface, line, point, and monad, are substances and even more so than body and solid (1028 B 15-18). This group, which in all probability includes both the Pythagoreans and the Platonists in general, is itself divided into two. (a) There are those (οἱ μέν) who think that no such substances as surface, line, point, and monad exist *apart* from the sensibles (1028 B 18-19); this means that they believe that such substances *actually* exist *in* the sensibles themselves. And these thinkers, according to Aristotle's own testimony elsewhere, are the Pythagoreans.⁸² (b) There are others (οἱ δέ), however, who think that there are several kinds of substances besides the sensibles⁸³ and that these substances, being eternal, are more real.⁸⁴ These philosophers are the Platonists (1028 B 19-27). And Aristotle gives a brief description of the different systems of Plato, Speusippus, and Xenocrates, identifying the two former by name but referring to the latter merely with the word ἑνιοι.

⁸⁰ On Aristotle's doctrine of οὐσία (= substance) as χωριστόν and on the related attack against the Platonists cf. Cherniss, I, pp. 318-376.

⁸¹ This is the main point Aristotle makes in 1028 B 13-15, a passage which has been misinterpreted by Ross and others. The interpretation adopted here has been discussed at length in a paper published in *Mnemosyne*, Ser. IV, 32 (1979), pp. 167-170.

⁸² Cf. *Metaphysics* 986 B 4-8, 990 A 3-5, 1080 B 16-21, 1090 A 30-35, and comm. on F 38, 1.

⁸³ At least two, as in the case of Plato, cf. 1028 B 19-20.

⁸⁴ In *Metaphysics* 1028 B 19 it is necessary to place a comma after μάλλον. Aristotle is not here comparing the number of ideas with the number of particulars, as he does elsewhere (cf. *Metaphysics* 990 B 4-5, 1078 B 36), but is saying that there is more than one kind of non-sensible substance (at least two, cf. the previous note) and that these substances, being eternal, are more real than sensible substance. On *Metaphysics* 1028 B 13-19 cf. my paper cited in note 81 *supra*.

According to this passage Plato posited three kinds of substances, the ideas, the mathematical, and the sensibles (1028 B 19-21). Some, i.e. Xenocrates,⁸⁵ identified ideas and numbers and said that the other substances come after them; these are lines and planes etc., until we reach the celestial substance and the sensibles (1028 B 24-27). Between the doctrines of Plato, on the one hand, and of Xenocrates, on the other, Aristotle gives a brief description of Speusippus' system (1028 B 21-24). This text is of the greatest importance because of what it tells us about Speusippus' doctrine and because of the inferences that can be drawn from the differences between his system and those of Plato and Xenocrates. It is also one of the two passages in the *Metaphysics* where Aristotle refers to Speusippus by name⁸⁶ and is thus one of the essential texts enabling us to identify other references to his doctrines in the *Metaphysics* and elsewhere.

5-8 Σπεύσιππος . . . οὐσία. Speusippus is here said to have posited even more substances (sc. than Plato's three), beginning with the One. We cannot infer, however, that Aristotle literally means that the One is itself an οὐσία different from the numbers, as the pseudo-Alexander (cf. on F 29b) and some modern scholars (e.g. Krämer, *Ursprung*, pp. 208-210; Happ, *Hyle*, p. 209 and n. 660; Kullmann, *Wissenschaft und Methode*, pp. 145-146, 149) think he does. This is incompatible with Aristotle's testimony elsewhere (cf. F 30, F 33, F 34: mathematical number is the first substance) and with the very implications of this passage. These lines imply that for Speusippus the One is the principle of number and that it is an entity. And, since Speusippus thought that one is the first number (cf. F 28, lines 18-22 with comm. *ad loc.*), it follows that the One is the same as the number one (cf. pp. 32-38 *supra*).

The One then is one of the principles of number, the other is τὸ πλῆθος = multiplicity" (cf. F 38, F 39, F 40, F 45a, F 46a, F 51).

⁸⁵ The identification of the ideas and (mathematical) numbers was Xenocrates' peculiar doctrine (cf. Asclepius, *In Metaph.*, p. 379, 17), and comparison of *Metaphysics* 1028 B 24-27 with Theophrastus, *Metaphysics* 6 B 7-9 (= Xenocrates, frag. 26 [Heinze]), Sextus, *Adv. Math.* VII, 147 (= frag. 5 [Heinze]), Themistius, *In De Anima*, p. 11, 20-37 (= frag. 39 [Heinze], cf. Cherniss, *Gnomon* 31 [1959], pp. 40-43 = *Selected Papers*, pp. 427-430), etc. leaves no doubt that the doctrines here ascribed to ἐνιοί are those of Xenocrates.

⁸⁶ The other is *Metaphysics* 1072 B 31 (= F 42a).

The principles of magnitude are the point (στυγμή), and something similar to πλῆθος but not identical with it (cf. F 51; on the point cf. also F 28, line 61; F 50, F 52, F 65). We do not know what principles Speusippus assigned to the soul (cf. on F 54a-b). Aristotle here mentions no other Speusippean οὐσία but implies that there are more, for he has mentioned only three but has also said that Speusippus posited more substances than Plato's three. The whole context (1028 B 8-32) indicates that Speusippus must have recognized the substantiality of the sensibles, and this can also be inferred from F 37, F 66a-b, F 67, F 75, F 76. We do not know whether or not he posited other substances besides these four. If he did, he probably did not go into details (cf. F 59).⁸⁷

What does Aristotle mean when he says "and *in this way* indeed he 'stretches' or 'multiplies' (ἐπεκτείνει) the substances (i.e. the kinds of substances)"? Merlan, *From Platonism*², pp. 192-193 thinks that Aristotle means the derivation of the sensibles from mathematical. But no such derivation is mentioned here at all and, moreover, Aristotle says that each kind of substance has its own peculiar principles. The only thing in the preceding lines to which τοῦτον δὲ τὸν τρόπον can refer is Speusippus' positing different principles for each kind of substance. The implication is that by doing so Speusippus is able to multiply the substances. For in Aristotle's view it is the fact that in each case the second principle, which he takes to be the "material principle," is different, that causes him to contend that the Speusippean universe is a series of disconnected "episodes" (cf. F 30, and esp. F 37 with comm. *ad loc.*). And so Aristotle's report about Speusippus' system here already implies one of the main criticisms he will elsewhere direct against it. This point has escaped scholars. Thus, Kullmann, *Wissenschaft und Methode*, pp. 149-150 thinks that this fragment is of no significance for Aristotle's objection to the lack of coherence of the Speusippean universe because Aristotle also ascribes several kinds of substances to Plato.

Since Aristotle says that Plato posited the ideas and the mathematical as different kinds of non-sensible substances and

⁸⁷ Frank's reconstruction of ten stages in the structure of the Speusippean universe (cf. *Plato*, pp. 131 ff., 245 ff.) is not to be found either in F 28 or in *Metaphysics* 1084 A 12-30 (which in any case cannot refer to Speusippus, since it deals with ideas), and is incompatible with Aristotle's testimony in F 29a and elsewhere.

that some (i.e. Xenocrates) identified ideas and numbers, it follows that Speusippus did not believe in the separate existence of ideas⁸⁸ and that he did not identify the numbers with ideas.⁸⁹ Nor can Speusippus' One be alive; life for Speusippus begins only with the third kind of substance, namely soul. This fragment also shows that for Speusippus the soul, *pace* Merlan and others, cannot be a magnitude, for it is a kind of οὐσία different from magnitude and its ἀρχαί are different from those of magnitude (cf. also on F 54a-b). For similar reasons magnitudes are not numbers, though there is a relation of similarity between them.⁹⁰

We have evidence independent of Aristotle that Speusippus used the word ἀρχή to designate his principles (cf. F 28, lines 36 and 61-62 with comm. on line 36). We have no such evidence about his use of οὐσία to designate the different kinds of substances, since Theophrastus and later authors who refer to Speusippus do not cite him verbatim and employ Aristotle's terminology. However, given the fact that Plato uses οὐσία of the ideas (cf. *Phaedo* 65 D-E, 76 D, 78 D, and Peipers, *Ontologia Platonica* [Leipzig, 1883], pp. 67 ff.), such a use of this word on the part of Speusippus is probable enough. But we must always bear in mind that Speusippus could not have meant by οὐσία all that Aristotle reads into that word (cf. note 80).

F 29b

The pseudo-Alexander has no independent knowledge of the doctrines of Speusippus (cf. note 91 *infra*). Here he merely paraphrases Aristotle, but in fact misunderstands 1028 B 21-24 (= F 29a), since he has confused the ἀρχαί with the οὐσίαι. It is ironical then that Christ in his edition of the *Metaphysics* has proposed, on the basis of the present passage (his reference is to Bonitz's edition), to excise ἐκάστης οὐσίας in *Metaphysics* 1028 B 22-23, the reading of which is in any case guaranteed by 1075 B 38-1076 A 1 (= F 30), cf. Lang, p. 67, note. It is probably the pseudo-Alexander's Neoplatonism that is responsible for his statement that the first οὐσία for Speusippus is τὸ αὐτόεν (cf. on F 29a, 5-8).

⁸⁸ Elsewhere Aristotle is explicit about this, cf. F 33, F 34, F 35, F 36.

⁸⁹ Cf. also F 34-36; Ravaisson, p. 30; Zeller, II, i, p. 1003, n. 1.

⁹⁰ Against Krämer's attempt to identify the decad with the divine mind cf. on F 58 *infra*.

F 29c

1-5. Just as in the case of the pseudo-Alexander (cf. on F 29b), we can infer that Asclepius is merely paraphrasing Aristotle, that he had no access to other sources for his knowledge of Speusippus' doctrines, and that he misunderstands F 29a. It contradicts Aristotle's testimony to assign different kinds of οὐσίαι to point, line, and surface, since Aristotle says that Speusippus assigned *one* kind of οὐσία to magnitudes. This agrees with Speusippus' own words, cf. F 28, lines 61-62 πρώτη μὲν γὰρ ἀρχὴ εἰς μέγεθος στιγμῇ, δευτέρα γραμμῇ, τρίτη ἐπιφάνεια, τέταρτον στερεόν, which show that for him the several magnitudes belong to one level of reality (cf. also F 28, lines 38-39). We may therefore also reject Asclepius' contention that for Speusippus νοῦς and ψυχὴ are different οὐσίαι, a statement which is probably due to this commentator's Neoplatonism. Consequently, it is illegitimate to use this passage as evidence for Speusippus' doctrine, as Stenzel, col. 1664, 19-23 does. It is noteworthy that in his comment on 1028 B 21-24 (cf. F 29d) Asclepius merely reproduces the information he finds in Aristotle's text.

1 Ὅμοιως . . . Ξενοκράτην. This refers to Asclepius' previous statement that Plato posited substances which are διανοήματα (i.e. the ideas and the mathematical) and κυρίως, and another, the sensibles, which is οὐ κυρίως.

F 29d

Cf. on F 29c. In line 3 the MSS' reading, τούτων, is impossible. Hayduck thinks that the text is corrupt; Lang, p. 67 (*ad loc.*) suggests <διὰ> τούτων, which can hardly be right, since Aristotle says καὶ τοῦτον δὴ τὸν τρόπον ἐπεκτείνει τὰς οὐσίας. Hence οὕτως (cf. F 29b) seems preferable.

F 30

Context. In *Metaphysics* Λ. 10, on the basis of his discussion in the preceding chapters, Aristotle argues first in support of his view that the universe possesses the good and the best in two ways: (a) As the immanent good that informs the parts of an ordered whole (τάξις) and (b) as the separate good that exists by itself (κεχωρισμένον τι καὶ καθ' αὐτό), i.e. the unmoved mover (cf. 1075 A 11-25). Hereafter he raises a series of *aporiae* against the views of

his predecessors, both the Presocratics and the Platonists, who cannot satisfactorily explain the relation of the universe to the principles they posit. (On Aristotle's criticism of Speusippus in 1075 A 31-B 1 cf. on F 46a.) Then in 1075 B 27 ff. he attacks the Platonists because neither the ideas nor the numbers can be causes, at any rate not efficient causes. Number in particular cannot be either efficient or formal cause of magnitudes (1075 B 28-30). Nor can a contrary (the allusion here is to the principles) be an efficient cause, because in that case the universe would not be eternal (1075 B 30-34). Finally, the Platonists cannot explain how the form and the individual thing are a unity (1075 B 34-37). On the criticism of Speusippus in 1075 B 27-37 cf. pp. 25-26, 27 f., and 58 ff. *supra*.

1-5. These, the last lines of *Metaphysics* Λ, are meant to be a specific criticism of Speusippus. Though he is not named, comparison of this passage with 1028 B 21-24 (= F 29a) shows that Aristotle here refers to his doctrines.⁹¹ Aristotle contends that Speusippus' doctrine of many οὐσίαι, each of which has its own peculiar ἀρχαί, is inconsistent with the two main points he has tried to prove in book Λ, which were summarized at the beginning of ch. 10: (a) Speusippus' several οὐσίαι would amount to a universe without internal τάξις. It would be merely a series of disconnected episodes (ἐπεισοδιώδης), since in it the existence or non-existence of one substance has no influence on any other substance. (b) The multiplicity of principles is incompatible with Aristotle's conception of the unmoved mover as the separate good that is the final cause of the universe. This second objection presupposes the rejection of Speusippus' doctrine of similarity between the several ἀρχαί (cf. pp. 49 ff. *supra*). But here the objection is mainly based on the fact that Aristotle is pressing the meaning of ἀρχή as "ruling principle" (cf. his quotation of Homer, *Il.* 2, 204 and Ross' note on 1076 A 3). And this Speusippus' One cannot be, since he refused not only to

⁹¹ Despite the fact that in his commentary on 1028 B 21-24 (cf. F 29b) he ascribed to Speusippus the very doctrine that Aristotle rejects in 1075 B 37-1076 A 4, the pseudo-Alexander in his commentary on the latter passage (*In Metaph.*, p. 721, 11-33) refers it to the Pythagoreans and even to Plato. This confusion shows that he understood little or nothing about Speusippus and that he had no access to sources independent of Aristotle (cf. also Ross, *Aristotle's Metaphysics*, II, p. 408, Cherniss, I, n. 77, on F 29b *supra*, and notes 92, 93, 104, 105, 113, etc. *infra*). The doctrine of F 30 is *not* Pythagorean, cf. on F 29a *supra*.

identify it with the good but even to ascribe to it goodness as a predicate (cf. on F 42a, F 43, F 44, F 45a, F 46a, F 47a). In short, then, Aristotle's second objection against Speusippus is directed against what he here considers to be Speusippus' failure to posit a supreme final cause, whereas his first objection, that of making the whole of nature "episodic," is directed against the plurality of "material principles" (cf. F 37 with comm. *ad loc.*).

This fragment specifically states that Speusippus' first οὐσία is mathematical number.

F 31

Context. Aristotle begins book Λ of the *Metaphysics* with the assertion that the investigation to be undertaken is about οὐσία, for it is of substance that the principles and the causes are sought. He then argues for the primacy of substance on the grounds that, if the universe is an organized whole, substance is primary; and that even if it is an ordered sequence (the view of Speusippus, cf. on F 30 and Ross' note on 1069 A 19-21), substance is still first, as the things in the other categories presuppose substance, the only thing which exists χωριστόν (1069 A 20-24; cf. on F 29a with note 80). The procedure of the ancients (= the Presocratics) testifies to the primacy of substance, since they searched for the principles, elements, and causes of οὐσία (1069 A 25-26). The tendency of Aristotle's criticism of the Platonists (οἱ μὲν οὖν νῦν) is shown by the following passage (1069 A 26-30), where he maintains that they posited the universals as substances. For the genera are universals, and it is the γένη that are ἀρχαί and οὐσίαι according to the Platonists. This they did because of the "abstract" (λογικῶς, cf. Ross' translation and his note on 1069 A 28) character of their inquiry, whereas the ancients thought that individual things (e.g. fire and earth) are substances and not what is common to them, namely body (cf. Ross' note on 1069 A 29). On Aristotle's criticism of Speusippus in 1069 A 20-36 cf. pp. 16 ff., p. 35 f. with note 177 *supra*.

1-6. Aristotle maintains that there are three *kinds* of substances: two are sensible, of which one is eternal (the ether or first body is meant), the other perishable as all agree (e.g. plants and animals); the third is immovable and unchangeable (ἀκίνητος); and some thinkers assert that this οὐσία has separate existence (χωριστή). These are the Platonists, and Aristotle enumerates three different

views: (a) some divide this substance into two, the ideas and the mathematical, others (b) identify the two, and still others (c) think that only mathematical have separate existence. Comparison of this passage with 1028 B 19-27 (= F 29a) shows that these are, respectively, the views of Plato, Xenocrates, and Speusippus.⁹² In the present passage τὰ μαθηματικά refers to both numbers and magnitudes. For his purpose here (which *kinds* of οὐσίαι χωρίζονται have been posited), Aristotle need not distinguish between the two, as he needs to do with the ideas and the mathematical (numbers and magnitudes). And it is well to keep in mind that in his own philosophy there is a basic difference between the forms of natural entities and those of mathematical (cf. pp. 25-27 and 29 *supra*).

Also this passage (cf. on F 29a) implies that Speusippus denied the separate existence of the ideas and that the identification of ideas with numbers cannot be ascribed to him. It specifically states that Speusippus posited the *separate* existence of mathematical, i.e. of numbers and magnitudes, and that in these substances there is no motion and change at all. (On the text of 1069 A 30-32 cf. Ross' note *ad loc.*)

F 32

Context. In book M Aristotle investigates whether there is beside the sensibles an immovable, unchangeable, and eternal substance (οὐσία ἀκίνητος καὶ αἰδώς) and, if there is, what it is. It is clear from books M and N, as well as from other places in the *Metaphysics*, that Aristotle thinks that of his predecessors only the Platonists posited the separate existence on non-sensible substances. In this he agrees with them but believes that they were wrong in thinking that this substance is the ideas or the mathematical or both. The Pythagoreans are dealt with in books MN, not because they posited the separate existence of mathematical, but because they, according to Aristotle, believed in the *actual* existence of mathematical *in* sensible things (cf. on lines 1-6 *infra*). This will enable Aristotle to present his own view about mathematical as a

⁹² The comments of the pseudo-Alexander on this passage (*In Metaph.*, pp. 670, 9-671, 22) show, once more (cf. note 91), that he has no knowledge of the doctrines of Xenocrates and Speusippus, since he ascribes the former's opinion to some of the Pythagoreans and that of the latter tentatively to some other Pythagoreans. In addition, he explicitly denies that οἱ μὲν οὖν οὖν in 1069 A 26 refers to Plato.

middle course between those of the Pythagoreans and those of the Platonists: mathematical exist potentially in the sensibles and are separable only in thought.

Given the divergent views of his predecessors concerning the nature of the separate, non-material substance, Aristotle outlines in ch. 1 of M the three questions that he will discuss in this book: (a) Whether mathematical as such exist and, if they do, how they exist. He explicitly states that in this investigation he will disregard whether mathematical are identified with the ideas or not and whether they are the substances and principles of existing things or not. This topic is discussed in M.2-3. (b) Similarly, whether the ideas as such exist or not. This is discussed in M.4-5. (c) Whether the substances (οὐσίαι) and principles (ἀρχαί) of things are numbers and ideas, which is discussed in M.6-9. Within the first chapter of M Speusippus' view is alluded to twice in conjunction with those of other Platonists.

1-6 Δύο . . . μαθηματικῶν. Two opinions have been advanced concerning the nature of the οὐσία ἀκίνητος καὶ ἀίδιος: (a) that the mathematical, e.g. numbers, lines, etc. are substances; (b) that the ideas are substances. This preliminary statement is merely intended to point out the *two* kinds of immaterial substances posited by his predecessors. Aristotle then distinguishes between the views of Plato (i), Xenocrates (ii), and Speusippus (iii); for, though he mentions none of them by name, comparison of this passage with 1028 B 19-27 (= F 29a) shows that Plato (i) posited both ideas and mathematical numbers, that Xenocrates (ii) identified the two, and that Speusippus (iii) thought that only mathematical have separate existence. In referring to the views of Plato and of Xenocrates Aristotle economically mentions numbers and not magnitudes merely because that enables him to point out the main difference between the two. Yet according to Aristotle Plato's intermediate mathematical include magnitudes (cf. e.g. 1028 B 19-20 and 987 B 14-18), and Xenocrates, too, posited the separate existence of magnitudes (cf. e.g. 1028 B 25-26 and 1080 B 28-30). Ross (in his note on 1076 A 20-21) says that ἕτεροι δὲ τινες κτλ. (lines 4-5) refers to Speusippus and the Pythagoreans. This is highly improbable, however, because Aristotle is thinking of those who believe that mathematical exist *apart from the sensibles* (1076 A 10-19), which is *not* the view of the Pythagoreans (cf. on F 29a with note 82 there).

6-8 ἀνάγκη . . . τινές. In view of the arguments advanced in the next chapter against those who believe that mathematical exist *in* the sensibles (1076 A 38-B 11), it seems that καθάπερ λέγουσι τινες is not a reference to the Pythagoreans (so Zeller, II, i, p. 1003, n. 1 against the more correct view of Susemihl, *Die genet. Entwickl. der platon. Philos.*, II [Leipzig, 1860], p. 520 and n. 668) but to some Platonists or Platonizing Pythagoreans who thought that mathematical are immanent in the sensibles though the ideas have separate existence (cf. 998 A 7-19 and, for the contrast with the Pythagoreans, 1080 A 37-B 3 with Ross' note on 1076 A 33 and Cherniss, I, pp. 536-537). Plato, Xenocrates, and Speusippus are included among those who believe that mathematical exist *χωρισμένα τῶν αἰσθητῶν*, cf. on F 31.⁹³ On Aristotle's criticism of this doctrine in 1076 B 11-1078 B 6, in so far as it affects Speusippus, cf. pp. 24 ff. *supra*.

F 33

Context. In *Metaphysics* M.6 Aristotle begins to examine the views of those who think that numbers have separate existence and are the first causes of things. This is the third topic announced in M.1 (cf. 1076 A 29-32 and on F 32 *supra*). Chapter 6 falls into two parts: a theoretical account of the different kinds of numbers that can be conceived (1080 A 15-B 11), followed by a historical survey of the several views of Aristotle's predecessors concerning the nature of number (1080 B 11-36).

Aristotle first offers the following *a priori* and exhaustive classification of number according to the nature of the units (1080 A 17-37):⁹⁴ (a) incomparable numbers with the units all incomparable, (b) mathematical number with the units all comparable, (c) incomparable numbers with the units of each number comparable with each other but incomparable with those of other numbers.⁹⁵

⁹³ The pseudo-Alexander, *In Metaph.*, pp. 723, 30-725, 8 refers to the Pythagoreans and to Plato in connection with 1076 A 16-35. Syrianus, *In Metaph.*, p. 81, 15 ff., for his part, confuses Pythagoreanism and Platonism and contends that the doctrine refuted in 1076 A 38-B 11 was held by no one among either the Pythagoreans or the Platonists. Moreover, both commentators fail to mention Speusippus and Xenocrates *à propos* of 1076 A 16-35.

⁹⁴ On Aristotle's and on the several Platonistic views of number, cf. pp. 13-20 *supra*.

⁹⁵ This is the classification Aristotle offers in the *corrective* summary of 1080 A 35-37. In 1080 A 15-35 he began a slightly different classification: (a) Incomparable numbers (i) with the units all incomparable, (ii) with the

These three kinds of numbers are then used in an additional classification in which the *fundamentum divisionis* is whether the numbers exist apart from the sensibles or in them (1080 A 37-B 4).⁹⁶ Leaving aside the parenthetical sentence in 1080 B 2-3 (on which cf. Ross' note on 1080 B 4), 1080 A 37-B 4 means, as Ross says, "The numbers must be either transcendent, or immanent . . . either some immanent and not others, or all immanent." Aristotle then asserts (1080 B 4-11) that of those who have said that the One is the principle, substance, and element of all existing things and that number is derived from the One and from something else,⁹⁷ everyone has described number in one of these ways (for according to Aristotle there are no other possibilities⁹⁸), except that nobody has held that all the units are incomparable (cf. also 1081 A 35-36).

There follows (1080 B 11-33) a survey of the following views: Plato (1080 B 11-14; cf. 987 B 14-18 and 1028 B 19-20) is said to have posited ideal number⁹⁹ and mathematical number, intermediate between the ideas and the sensibles, both kinds of numbers having separate existence. 1080 B 14-16 gives Speusippus' view (cf. on lines 3-5 *infra*). Then come the Pythagoreans (1080 B 16-21)¹⁰⁰ who like Speusippus believe in mathematical number only but, unlike him and the other Platonists, in numbers with units which

units all comparable, and (iii) with the units of each number comparable with each other but incomparable with those of other numbers. But instead of adding (b) mathematical number with the units all comparable, Aristotle interrupts this classification and offers that of 1080 A 35-37. This he does probably because in the course of explaining (a, ii) he had referred to mathematical number (1080 A 21-33), had then explained the difference between mathematical number and incomparable numbers such as (a, iii), and had implied that incomparable numbers such as (a, ii) are impossible, since if all the units are comparable there is only mathematical number (cf. 1081 A 5-7). For a discussion of 1080 A 15-37 and of other views on this passage cf. my paper in *GRBS* 19 (1978), pp. 83-90.

⁹⁶ By the latter view Aristotle here means the Pythagoreans, not the thinkers he attacks in 1076 A 38-B 11, and to whom he alludes in 1076 A 33-34 (cf. on F 32, 6-8 *supra*). Cf. 1080 B 2-3, 16-21, and 31-33.

⁹⁷ On this statement of Aristotle's (cf. also 1080 B 31-32) in so far as Speusippus is concerned cf. p. 41 with notes 198 and 199 *supra*.

⁹⁸ On Aristotle's failure to understand Plato's ideal numbers cf. pp. 16-18 *supra*.

⁹⁹ I.e. that which has a serial order, cf. 1080 B 12 τὸν μὲν (sc. ἀριθμὸν) ἔχοντα τὸ πρότερον καὶ ὕστερον τὰς ἰδέας and compare with 1080 A 17-18 τὸ μὲν πρῶτον τι αὐτοῦ τὸ δ' ἐχόμενον, ἕτερον δὲ τῷ εἶδει ἑκαστον (= incomparable numbers), cf. J. Cook Wilson, *CR* 18 (1904), pp. 249-251, 253-255; Cherniss, *I*, pp. 514-515; and pp. 14-16 *supra*.

¹⁰⁰ For the inclusion of the Pythagoreans in *Metaphysics* MN cf. on F 32 *supra*.

have spatial magnitude and which therefore are immanent in the sensibles (cf. also 1080 B 30-33). 1080 B 21-22 refers to the view of an anonymous Platonist who believes in ideal number only (cf. Ross' note *ad loc.*), and 1080 B 22-23 to the view of Xenocrates who identified ideal and mathematical number.¹⁰¹ Next comes a digression on magnitudes (1080 B 23-30) where we find Plato's opinion as expressed from the point of view of Xenocrates' doctrine (1080 B 24-25; cf. Cherniss, *AJP* 68 [1947], pp. 250-251 with n. 94 = *Selected Papers*, pp. 201-202) that there are ideal and mathematical magnitudes, that of Speusippus (1080 B 25-28; cf. on lines 8-9 *infra*), and that of Xenocrates (1080 B 28-30),¹⁰² who speaks of mathematical, both numbers and magnitudes, in a non-mathematical way, for he believes that not every magnitude is divisible and that not any two units make up the number two. The chapter ends with Aristotle's assertion that all the views outlined are impossible (1080 B 33-36).

3-5 οἱ . . . αἰσθητῶν. This is the opinion of Speusippus, for it is he who believed in mathematical number only and in the separate existence of it (cf. F 29a, F 30, F 31, F 32), and who posited mathematical number as the first οὐσία (cf. F 29a and esp. F 30). Here there is no need to excise τόν, for τὸν πρῶτον = ὃν πρῶτον εἶναι.

8-9 τῶν . . . φασιν ἰδέας. That οἱ μὲν here refers to Speusippus is to be inferred from comparison of these lines with *Metaphysics* 1028 B 21-23 (= F 29a), 1069 A 36 (= F 31), and 1076 A 16-22 (= F 32). This passage states that Speusippus did not identify the ideas with numbers and that he explicitly denied the separate existence of the ideas. The wording here is noteworthy: μὴ ποιοῦσι τὰς ἰδέας ἀριθμούς and μὴδὲ εἶναι φασιν ἰδέας. The implication seems to be that Speusippus did not identify the ideas with numbers, that is, that he did not believe in *any* kind of idea-numbers,¹⁰³

¹⁰¹ Cf. 1028 B 24-27, with comm. on F 29a and note 85 there, 1076 A 20-21, 1083 B 1-8, 1086 A 5-11, and 1090 B 20-32.

¹⁰² Cf. Ross' notes on 1080 B 28 and 29 and *Metaphysics* 1036 B 13-20 with Cherniss, *Gnomon* 31 (1959), pp. 44-45 = *Selected Papers*, pp. 431-432.

¹⁰³ That Speusippus' view is incompatible with Plato's ideas and with any kind of idea-numbers is clear from the whole passage 1080 B 11-30 and from F 29a, F 31, and F 32 also. Cf. 1083 A 20-24 (= F 34): ἀλλὰ μὴν οὐδ' ὥς ἕτεροί τινες λέγουσι περὶ τῶν ἀριθμῶν λέγεται καλῶς. εἰσι δ' οὗτοι ὅσοι ἰδέας μὲν οὐκ οἴονται εἶναι οὔτε ἀπλῶς οὔτε ὥς ἀριθμούς τινας οὔσας, τὰ δὲ μαθηματικά εἶναι καὶ τοὺς ἀριθμούς πρῶτους τῶν ὄντων, κτλ. (contrast also with the view of Xenocrates in 1083 B 1-8).

because he denied the separate existence of ideas as such (cf. also on F 34, 1-15 *infra*). From 1080 B 14-21 and especially from 1080 B 30-33 we infer that the units of Speusippus' mathematical numbers are abstract, non-spatial monads (cf. μοναδικοὶ ἀριθμοὶ in 1080 B 30, contrasted with the numbers of the Pythagoreans, and Ross' note on 1080 B 19).

These lines (i.e. 1080 B 24-28) cannot refer also to the Pythagoreans, as Ross (on 1080 B 26) says they do, because the Pythagoreans did not believe in the separate existence of mathematical magnitudes, as even their numbers are composed of extended units. The three views about magnitudes outlined in 1080 B 23-29, however, are about separate magnitudes, since τὰ μαθηματικά here can have no other meaning (cf. 1028 B 19-27 and the comm. on F 31, 1-6). Nor is it at all likely that Aristotle would ascribe to the Pythagoreans the explicit rejection of the Platonic ideas.¹⁰⁴

F 34

Context. Aristotle devotes *Metaphysics* M.7 to a refutation of incomparable numbers. He argues that the units cannot all be incomparable (cf. 1080 A 18-20), nor can the units of each number be comparable with each other but incomparable with those of other numbers (cf. 1080 A 23-30 and 33-35). But if the units are all comparable, there is mathematical number only. In M.8, 1083 A 1-20 Aristotle contends that units *qua* units differ neither in quantity nor in quality, whereas number *qua* number differs in quantity, for quality is said [φασίν, 1083 A 11] to belong to number *after* quantity (cf. Ross' note on 1083 A 11). Since the units are all undifferentiated and comparable, the ideas cannot be numbers (and if they are not numbers, they cannot exist at all, cf. 1081 A 12 ff.). At this point Aristotle argues against Speusippus' view that mathematical number is the only number and that it exists besides the sensibles (1083 A 20-B 1 = F 34). There follows an attack against Xenocrates' identification of ideal and mathematical number (1083 B 1-8) and against the Pythagorean conception of numbers composed of extended units (1083 B 8-19). If number, then, cannot exist in any of these ways (cf. 1080 B 11-1083 B 19), its nature cannot be such

¹⁰⁴ The ancient extant commentators, pseudo-Alexander, *In Metaph.*, p. 745, 31-34, Syrianus, *In Metaph.*, p. 122, 18-23, and an anonymous *scholion* in *Codex Parisinus Graecus* 1853, p. 818 B 15 (Brandis), wrongly ascribe 1080 B 14-16 to Xenocrates.

as is ascribed to it by those who think that number has separate existence (1083 B 19-23); and so number cannot be a self-subsistent entity.

1-15. Comparison of this passage with *Metaphysics* 1028 B 21-24 (= F 29a), 1075 B 37-38 (= F 30), and 1080 B 14-16 and 25-28 (= F 33) shows that it refers to Speusippus, for he rejected the existence of the ideas, posited the separate existence of mathematics (τὰ μαθηματικά here refers to both numbers and magnitudes) and asserted that mathematical number is the first οὐσία.¹⁰⁵

We find here additional information about Speusippus. He rejected the separate existence of the ideas as such (ἀπλῶς). This means that he rejected the theory of ideas that Aristotle ascribes to Plato as the original one,¹⁰⁶ which is the theory also found in the dialogues.¹⁰⁷ According to it there are ideas of all things to which a common name is applied; hence there are also ideas of numbers, i.e. an ideal two, an ideal three, etc.¹⁰⁸ We may infer then that Speusippus saw difficulties in the ideas as such, whether or not he also saw additional difficulties in the ideal numbers or ideas of numbers (cf. also *Metaphysics* 1080 B 27-28 with comm. on F 33, 8-9). Since it is also said that Speusippus thought that "the ideas are not some numbers," it is clear that he did not believe in idea-numbers of any kind, that is neither in Xenocrates' identification of the ideas with mathematical numbers nor in the alleged identification of the ideas with non-mathematical numbers which Aristotle ascribes to Plato (cf. further pp. 17-18 *supra*).

¹⁰⁵ This is the only reason why F 34 should be taken to refer to Speusippus. The testimony of the pseudo-Alexander, which is cited by Guthrie, *History*, V, p. 460, n. 1 as evidence for ascribing F 34 (and also F 35) to Speusippus, is worthless, for he (*In Metaph.*, p. 766, 4-8, 14-15, and 17-18) and also Syrianus (*In Metaph.*, p. 141, 22-27) ascribe Speusippus' doctrine to "some of the Pythagoreans," and Xenocrates' identification of ideal and mathematical number to both Speusippus and Xenocrates. (Cf. also notes 91 *supra* and 115 *infra*.)

¹⁰⁶ Cf. *Metaphysics* 1076 A 27 χωρίς περί τῶν ιδεῶν αὐτῶν ἀπλῶς, with Ross' note *ad loc.*, 1078 B 9-32 (where n.b. περί δὲ τῶν ιδεῶν πρῶτον αὐτὴν τὴν κατὰ τὴν ιδεάν δόξαν ἐπισκεπτέον, μηθὲν συνάπτοντας πρὸς τὴν τῶν ἀριθμῶν φύσιν, ἀλλ' ὡς ὑπέλαβον ἐξ ἀρχῆς οἱ πρῶτοι τὰς ιδέας φήσαντες εἶναι), 987 A 29-B 10, 1086 A 37-B 11. Cf. Cherniss, I, pp. 175-222.

¹⁰⁷ Cf. pp. 13-14 *supra*.

¹⁰⁸ On this aspect of Plato's theory of ideas cf. pp. 13-15 *supra*.

Nothing in F 34 (nor any other passage in the Aristotelian Corpus) justifies the interpretation of Merlan, *From Platonism*^a, p. 106 and Happ, *Hyle*, p. 212, n. 668 that Aristotle differentiates in Speusippus' system the One as the first principle from the One as the principle of number. To begin with, Aristotle himself states here and elsewhere (cf. F 29a, F 30, F 33) that for Speusippus numbers are the *first* entities. Secondly, each kind of substance has its own peculiar principles (cf. F 29a, F 30), and so there is no single supreme principle in the Speusippean universe (cf. pp. 41, 49 and 51-52 *supra*). Finally, F 34 itself states that "the One itself" is the principle of mathematical number,¹⁰⁹ and Aristotle makes it clear that it is this very One that must be different from the other units. Now Speusippus must have said that the One is the principle of number and must have differentiated it from the other numerical units (cf. 1083 A 24-25 ἄτοπον γὰρ τὸ ἐν μὲν εἶναι τι πρῶτον τῶν ἐνῶν, ὥσπερ ἐκεῖνοι φασί); and, since he considered one to be the first number (cf. F 28, lines 18-22 with comm. *ad loc.*), we may infer that for him the One as the principle of number is the same as the number one (cf. pp. 33-38 *supra*).

Aristotle's criticism of Speusippus amounts to the following argument. Speusippus posited the *separate* existence of mathematical numbers and said that the One is the principle of number. Aristotle contends that the very reason that led Speusippus to posit a first One should also have caused him to posit a first Two, a first Three, etc. Hence the One is not the principle of mathematical number. (Speusippus, however, did not hypostatize the One as the formal cause of the other units, as Aristotle here says he did, but hypostatized the number one [= the One, cf. pp. 32-38 *supra*] because he hypostatized *all* the natural numbers, a fact of which Aristotle is well aware [cf. F 29a-F 36]. Therefore, Aristotle's report in F 34 is due to his desire to face Speusippus with the dilemma that he must give up either his belief in mathematical number or his doctrine of the separate existence of numbers.)

Now the main point Aristotle is trying to prove in 1083 A 20-B 1 is that number cannot exist apart from the sensibles (cf. 1083 A 37-B 1 οὐκ ἂν ἐνδέχοντο εἶναι τὸν ἀριθμὸν χωριστόν). The implication of

¹⁰⁹ It is obvious even from F 34 itself that it is mathematical number that Aristotle ascribes to Speusippus, since it is said here that he rejected the ideas and the idea-numbers and posited separately existing mathematical and numbers as the first of entities.

his argument here is that separately existing mathematical numbers would have to be incomparable with one another (for according to Aristotle only incomparable numbers could have separate existence), but that this is impossible since in mathematical number all the units are comparable and undifferentiated (cf. 1080 A 21-23, 30-33, and esp. 1081 A 5-7). Aristotle believes that Speusippus himself must have seen the difficulty of his position since he posited a first One. He contends, however, that the very reason that leads to a first One as the formal cause of the other units (cf. 1083 A 24-25 τὸ ἐν μὲν εἶναι τι πρῶτον τῶν ἐνῶν)¹¹⁰ must also lead to a first Two of two's a first Three of three's, etc. And Aristotle implies that the reason why Speusippus posited a first One is that the Speusippean numbers have separate existence. The main difficulty Aristotle sees in Speusippus' doctrine, however, is that he posited the *separate* existence of mathematical number. Had Speusippus said that mathematical number exists separately but without positing any principles at all, Aristotle's argument would still be that each such number, because it exists apart, has to be incomparable with the other numbers, and this would require positing a first One, a first Two, etc. And so he faces Speusippus with a dilemma: either one posits mathematical number only (= comparable number) and the One is not the principle of number, since *all* the units are undifferentiated; or, if one posits a first One as the principle of number, one must also posit a first Two, a first Three, etc., as Plato did. But these numbers would be incomparable with one another (cf. 1083 A 34-35 καὶ οὐ συμβλητοὺς εἶναι τοὺς ἀριθμοὺς πρὸς ἀλλήλους), and the existence of incomparable numbers Aristotle considers to have already been refuted (cf. 1080 B 37-1083 A 20).¹¹¹

In short, then, mathematical numbers cannot have *separate* existence, for, if they did, they would be incomparable with one

¹¹⁰ Aristotle does not here press the argument that it is impossible to differentiate the first One from the other units and that consequently the One cannot be the formal cause of mathematical number.

¹¹¹ Aristotle's arguments and its implications have been misunderstood by Annas, *Aristotle's Metaphysics M and N*, p. 175. For it is *not* the case that either Speusippus or Aristotle have confused one and unit [see the text *supra*], nor that Speusippus retains "the derivation of numbers from one and indefinite two." So far as the latter point is concerned, it must be said (a) that F 34 is not directed against the derivation of numbers as such, (b) that in any case Speusippus' numbers are not "derived" (cf. pp. 32-41 *supra*), and (c) that Speusippus' second principle of numbers is *not* "the indefinite two" but πᾶσι (cf. on F 38, 1).

another, and incomparable numbers with the units all comparable is a self-contradictory notion. Here and elsewhere Aristotle assumes the equivalence of incomparable numbers (= idea-numbers and/or ideal numbers) with separately existing numbers, and of comparable numbers (= mathematical numbers) with numbers which cannot be self-subsistent entities.¹¹² On Aristotle's criticism of Speusippus in F 34 cf. pp. 23-24 and 37-38 *supra*.

F 35

Context. In *Metaphysics* M.9, 1085 B 36-1086 A 18 Aristotle brings to an end his criticism of those who posit the separate existence of number.¹¹³ He contends that the very differences between the several Platonistic views of number show that the facts are not what these theories allege they are. Aristotle then describes the views of Speusippus (1086 A 2-5), who posited mathematical number only, of Xenocrates (1086 A 5-11), who identified ideal and mathematical number, and of Plato (1086 A 11-13), who posited ideas and ideal numbers, on the one hand, and mathematical, including mathematical numbers, on the other.¹¹⁴ But though each one of them is right in some respect, on the whole they are all wrong. The failure of the several Platonistic doctrines of number Aristotle ascribes to the fact that their hypotheses and their principles are false.

Comparison with *Metaphysics* 1028 B 19-27, 1076 A 19-22, and 1080 B 11-16 and 21-23 shows that in 1086 A 2-13 Aristotle is referring, respectively, to Speusippus, Xenocrates, and Plato (cf. comm. on F 29a, F 32, and F 33 *supra* and Ross' notes on 1086 A 2, 5, and 11-12).¹¹⁵

2-5 οἱ . . . ἐποίησαν. This passage tells us Speusippus believed that only the mathematical (i.e. numbers and magnitudes) exist

¹¹² Cf. *Metaphysics* 1080 A 15-37 and 1080 B 37-1082 B 37 with Tarán, *GRBS* 19 (1978), pp. 83-90, esp. 86-88.

¹¹³ In M. 7-9 Aristotle has also discussed magnitudes. Cf. already 1080 B 23-29.

¹¹⁴ In 1086 A 12 εἶναι should be excised, cf. Christ (in crit. app.) and Cherniss, *Riddle*, p. 96, n. 83. On 1086 A 11-13 cf. Cherniss, *op. cit.*, p. 47 and Cherniss, I, pp. 480 and 483.

¹¹⁵ Pseudo-Alexander, *In Metaph.*, p. 782, 31-36 wrongly ascribes 1086 A 2-5 to Speusippus and to Xenocrates, while Syrianus, *In Metaph.*, p. 159, 7-11, in accordance with his comment on 1080 B 14-16 to which he here refers, implies that this is the view of Xenocrates. On Guthrie cf. note 105 *supra*.

apart from the sensibles; and that, because of the difficulty he saw in the theory of ideas, he rejected ideal number and posited the separate existence of mathematical number. The implication of this passage is that Speusippus rejected ideal number because he rejected the separate existence of *all* ideas (cf. also on F 33 and F 34), and that for the same reason he also rejected ideal magnitudes. (On εἰδητικὸς ἀριθμός = ideal number, cf. Ross' note on 1086 A 4.) The difficulty (δυσχέρεια) that Speusippus saw in the theory of ideas, which is mentioned also in 1090 A 8 (= F 36), is probably that described in 1085 A 23-31 (cf. pp. 70-72 and p. 80, note 382 *supra*). Hence the ideas are mere fiction (πλάσις).

F 36

Context. We must take into consideration 1090 A 2-1091 A 12. For this whole passage does not properly belong to the subject of book N, the examination of the principles of the Platonists, but to the more general question, do number and magnitudes exist separately and are they the causes of existing things (cf. M.2-3 and 6-9). In 1090 A 2-1091 A 12, however, Aristotle is primarily concerned with refuting Speusippus. For the discussion of his doctrine was postponed in 1086 A 29-30 (οἱ μὲν οὖν ἀριθμούς ποιοῦντες μόνον καὶ τούτους μαθηματικούς ὕστερον ἐπισκεπτέοι), when Aristotle began to examine the views of those who think that the ideas and the numbers exist and that their elements are also the elements and principles of existing things (1086 A 21-29). He then objected to the belief in the ideas as substances, a belief which arose from the mistaken notion that, since the particulars which are in flux cannot be the objects of knowledge, the universals must be substances (1086 A 31-B 13). And so in 1090 A 2-1091 A 12 we find the corresponding discussion of Speusippus, to whom 1090 A 7-15, 25-30, 35-B 20 refer (cf. F 36, F 37, and F 50). To be sure, in 1090 A 2-1091 A 12 Aristotle also refers in a critical way to the Pythagoreans, on the one hand, and to Xenocrates and Plato, on the other. He does so, however, in order to present Speusippus' doctrine in the most unfavorable light of all. Thus the Pythagoreans are favorably contrasted with Speusippus because they at least recognized that the attributes of numbers are present in sensible things, a point that Aristotle himself accepts and tries to explain (cf. M.2-3). In 1090 A 2-B 5 the partisans of idea-numbers are explicitly said not to be open to the main objection Aristotle there raises against Speusippus,

namely, that he failed to posit numbers as causes, and so was deprived of any reason at all for thinking that numbers exist separately. And, though Xenocrates and Plato are criticized at length in 1090 B 20-1091 A 12, both are excluded from the second main charge Aristotle brings against Speusippus (cf. on F 37), that his doctrine reduces nature to a series of disconnected episodes.¹¹⁶

The structure of *Metaphysics* 1090 A 2-B 5 is as follows: (a) why must we believe in the existence of numbers? (1090 A 2-4); (b) the partisans of idea-numbers (1090 A 4-7); (c) Speusippus (1090 A 7-15); (d) the partisans of idea-numbers (1090 A 16-20); (e) the Pythagoreans (1090 A 20-25); (f) Speusippus (1090 A 25-30); (g) the Pythagoreans (1090 A 30-35); (h) Speusippus (1090 A 35-B 1); (i) Aristotle's final refutation of Speusippus (1090 B 1-5).

1-33. Comparison of this passage especially with F 29a, F 33, and F 35 shows that 1090 A 7-15, 25-30, and 35-B 1 (= lines 5-11, 19-24, and 27-30) refer to Speusippus, for it was he who saw difficulties in the separate existence of the ideas, and who, for that reason, did not identify them with numbers but posited instead the separate existence of mathematical numbers and magnitudes.

According to Aristotle (lines 2-11), if indeed each number is an idea, and if one grants that the idea is somehow the cause of being for existing things, one must admit that the partisans of idea-numbers (cf. note 120) try to account for the existence of numbers as causes. Speusippus, however, seeing the inherent difficulties of the ideas,¹¹⁷ rejected them and did not identify them with numbers; instead he posited separately existing mathematical numbers. In doing so, Aristotle contends, he deprived the numbers of any function whatsoever; for such a number is not observed to be the cause of anything, nor did Speusippus himself claim that it is the cause of anything (οὐθενός γὰρ οὔτε φησὶν ὁ λέγων αὐτὸν εἶναι, sc.

¹¹⁶ Once it is seen that the main purpose of 1090 A 2-1091 A 12 is to refute Speusippus' doctrine, the discussion of which was postponed in M. 9, 1086 A 29-30, and that 1090 A 13-15 refers to M. 2-3 (cf. note 120 *infra*), one may reject the different interpretations of Bonitz and Ross. The former (*Aristotelis Metaphysica*, pp. 578-579, followed by Reale, *Metafisica*, II, pp. 432-433, n. 28), thinks that whereas M. 2-3 deals with the nature of mathematical as such, 1090 A 2-1091 A 12 deals with the opinions of individual philosophers. Ross, *Aristotle's Metaphysics*, II, p. 479 contends that 1090 A 2-1091 A 12 and M. 2-3 "cover much the same ground" and that M and N "were originally independent essays."

¹¹⁷ On δυσχερεῖα cf. comm. on F 35, 2-5 and p. 80, note 382 *supra*.

αἵτιον). He simply asserted that number has its own peculiar nature (ἀλλ' ὡς αὐτὴν τινα λέγει καθ' αὐτὴν φύσιν οὖσαν), that is to say that it has separate existence (cf. also lines 29-30 εἶναι τε ὑπολαμβάνουσι καὶ χωριστὰ εἶναι). Aristotle's objection, that all the θεωρήματα of the arithmeticians are also true of the sensibles, implies that Speusippus himself must have adduced the truth of the theorems of arithmetic in support of his belief in the separate existence of mathematical number. If this is so, Speusippus must have meant by θεωρήματα any kind of knowledge about his separately existing numbers,¹¹⁸ whereas Aristotle himself may be using the word in the sense of "arithmetical demonstrations" (cf. note 245). Be that as it may, it appears that one of the reasons why Speusippus posited the separate existence of numbers was to provide separate and unchangeable objects of knowledge. This interpretation receives support and further enlightenment from lines 19-24 and 27-30. In the former passage Aristotle ascribes the following argument to Speusippus: the mathematical sciences (αἱ ἐπιστήμαι, cf. τὰ μαθηματικά in line 23) do not have sensible entities as their objects. And in lines 27-30 Aristotle asserts that Speusippus posited the separate existence of numbers (εἶναι τε ὑπολαμβάνουσι καὶ χωριστὰ εἶναι), because the axioms (τὰ ἀξιώματα), which are true and "greet the soul,"¹¹⁹ cannot refer to the sensibles. But what is the meaning of τὰ ἀξιώματα here? If Aristotle is using the word ἀξιώματα in his own sense, it must refer to the common principles that the mind knows directly; it can hardly be taken to be used loosely for mathematical theorems in general, both arithmetical and geometrical (cf. note 248). In that case Aristotle is here ascribing to Speusippus the argument that numbers have separate existence because certain

¹¹⁸ On ἀξιώματα and θεωρήματα in Speusippus cf. on F 72-74 *infra*.

¹¹⁹ The expression σαίνει τὴν ψυχὴν may be a quotation from a poet or from a writer of poetical prose, as Ross says in a note to his translation (cf. also his commentary on 1090 A 37, where he quotes Sophocles, *Oed. Col.* 319-320 φαιδρὰ γοῦν ἀπ' ὁμμάτων | σαίνει με); but even if this is so, it was probably Speusippus himself who originally gave the quotation (cf. also Schofield, *MH* 28 [1971], p. 14). Be that as it may, Aristotle means with these words to give one of the reasons why Speusippus posited the separate existence of mathematical numbers. In view of the context (ἀληθὴ δὲ τὰ λεγόμενα καὶ σαίνει τὴν ψυχὴν, εἶναι τε ὑπολαμβάνουσι καὶ χωριστὰ εἶναι), we may infer that it is the soul that apprehends the separately existing mathematical and that *knowledge* cannot exist unless there are such entities and such an organ. This is evidence that for Speusippus, as for Plato, the mind (νοῦς) is a faculty of the soul and not a separate entity (cf. further on F 58 *infra*).

propositions about them the mind knows directly; this would imply that according to Speusippus—not to Aristotle of course—the mind has direct knowledge of the separately existing numbers. On the other hand, if Aristotle is here reproducing Speusippus' own wording, as he probably is (cf. note 119), τὰ ἀξιώματα would refer to the direct knowledge (cf. note 118) the mind has of arithmetical propositions because it directly apprehends the separately existing numbers (cf. pp. 21-23 *supra*). In either case, a difficulty arises with the interpretation of line 30 ὁμοίως δὲ καὶ τὰ μεγέθη τὰ μαθηματικά, since Speusippus held that all geometrical knowledge is derivative (cf. on F 72-74 and pp. 22 f., 29-30, and 54-56 *supra*). And so we must infer either that Aristotle is misreporting Speusippus on the question of geometrical magnitudes or, as seems more probable, that with the sentence ὁμοίως . . . τὰ μαθηματικά he is loosely referring only to εἶναι τε ὑπολαμβάνουσι καὶ χωριστὰ εἶναι and not specifically to the argument Speusippus used in support of the separate existence of numbers, namely that the mind has direct knowledge of them.

Against this doctrine Aristotle contends that the axioms and theorems of mathematics are true also of sensible things and that, if mathematics existed separately, their attributes would not have been present in sensible things, as in fact they are. That not only lines 10-11 and 22-24, but also 30-33 are meant to be critical of Speusippus and of no one else, is certain. For one thing, the preceding lines (27-30) refer to his own peculiar doctrine of the separate existence of mathematical numbers and magnitudes only, and Aristotle's main purpose is 1090 A 2-B 5 is to refute him (cf. the introductory note to F 36). Moreover, Aristotle has himself said that those who posit idea-numbers try to offer some explanation for the existence of numbers as causes (cf. lines 2-5 and 12-14); and so his argument in lines 30-33 could hardly be aimed also at Plato as Ross (on 1090 A 4) and others think.¹²⁰ Nor is it the case,

¹²⁰ In line 31 δ ἄρτι ἡπορήθη refers to lines 22-24 (καὶ δῆλον ὅτι οὐ κεχώρισται τὰ μαθηματικά· οὐ γὰρ ἂν κεχωρισμένων τὰ πάθη ὑπῆρχεν ἐν τοῖς σώμασιν), which were aimed at Speusippus. In line 22, ἡμεῖς δὲ φαμεν εἶναι (sc. that the mathematical sciences are true of sensibles), καθάπερ εἵπομεν πρότερον, the underlined words refer to lines 10-11, where καθάπερ ἐλέχθη refers to M. 2-3 (cf. esp. 1077 B 17-22 and 1078 A 28-31). The mistaken notion (cf. e.g. Ross' note on 1090 A 4, Reale, *Metafisica*, II, pp. 410 and 435, n. 11, Annas, *Aristotle's Metaphysics M and N*, pp. 208-209) that lines 30-33 are aimed against both Plato (or Platonists generally) and Speusippus is due to misunderstanding of δ ἐναντιούμενος λόγος in lines 30-31. This expression desi-

either, that 1090 A 4-7 (= lines 2-5) refers to Plato, as Ross and others believe that it does. For “each number is an idea” cannot be true of Plato, since Aristotle ascribes to him the belief in non-ideal mathematical numbers (cf. *Metaphysics* 987 B 14-18, 1028 B 19-21, 1076 A 19-20, 1086 A 11-13, 1090 B 32-1091 A 3). Lines 2-5 refer to Xenocrates, and even 1090 A 16-17 (= lines 12-13), though it can refer to Xenocrates and to Plato, was probably meant to refer only to the former.¹²¹ *Pace* Ross, the purpose of 1090 A 2-B 5 is not to play off against one another the doctrines of the partisans of idea-numbers, of Speusippus, and of the Pythagoreans. It is noteworthy that Speusippus is refuted at length and that even his rejection of the ideas is presented here in an unfavorable light (he abandoned the “causal” aspect of the theory), whereas the favorable aspects of the other two doctrines are more prominent here than their respective deficiencies. On the validity of Aristotle’s criticisms of Speusippus in F 36 cf. pp. 24-27 *supra*.

gnates, not the Pythagorean argument (so Ross, in his note on 1090 B 2, and others), but Aristotle’s own position as stated in lines 22-24, cf. Cherniss, *Gnomon* 31 (1959), pp. 45-46 and p. 46, n. 1 = *Selected Papers*, pp. 432-433, with his reference to pseudo-Alexander, *In Metaph.*, p. 814, 37-38.

¹²¹ The statement in 1090 A 4-7 (= lines 2-5) fits the doctrine of Xenocrates and also that of the anonymous Platonist of 1080 A 21-22, but with the latter Aristotle does not seem to be concerned here. 1090 A 16-17 (= line 12) speaks of those who posited the existence of the ideas and said that they are numbers. This is an appropriate description of Xenocrates and could also refer to Plato, but Ross, *Aristotle’s Metaphysics*, II, p. 478 and others refer this passage solely to Plato. The probability is, however, that the thinkers in 1090 A 16-17 are the same as those referred to in 1090 A 4-7, and the latter passage *cannot* refer to Plato. Moreover, it is noteworthy that Plato’s doctrine is criticized in 1090 B 32-1091 A 3 because it posits two kinds of numbers, ideal and mathematical, whereas in 1090 B 20-32 Aristotle objects to Xenocrates’ mathematical magnitudes on grounds somewhat similar to those he had used against Speusippus in F 36. In short, 1090 A 16-17 cannot refer only or primarily to Plato, and it is more probable than not that it does not refer to him at all. It seems that in 1090 A 2-B 32 it is Xenocrates’ doctrine, among those of the Platonists, that is contrasted with that of Speusippus. (On 1090 A 16-20 Annas, *Aristotle’s Metaphysics M and N*, p. 208 says: “After the last argument, a serious identification of Forms and numbers cannot be in mind here. The point can only be that since the Platonists think of numbers as Forms, *some forms are numbers*” [italics are mine]. This is an inexcusable mistake for a commentator to make, for the text clearly says that the ideas are numbers: οἱ μὲν οὖν τιθέμενοι τὰς ἰδέας εἶναι, καὶ ἀριθμοὺς αὐτὰς εἶναι.)

F 37

Context. Cf. the introductory notes to F 30 and F 36 *supra*.

1-7. This passage is a refutation of those who posit the (separate) existence of mathematical numbers and magnitudes, not of the partisans of ideas (cf. lines 6-7 τοῖς δὲ τὰς ἰδέας τιθεμένοις τοῦτο μὲν ἐκφεύγει), and who as a consequence of this make of nature a series of disconnected episodes.¹²² Comparison with *Metaphysics* 1028 B 21-24 (= F 29a) and 1075 B 37-1076 A 3 (= F 30) shows that 1090 B 13-20 (= F 37) refers to Speusippus.

In F 29a Aristotle mentions numbers, magnitudes, and soul as the first three οὐσίαι Speusippus posited. They are also mentioned here in the same order in connection with Aristotle's charge that the οὐσίαι contribute nothing to one another, *the prior to the posterior*. We may accept then Aristotle's testimony about Speusippus' first three substances. But we cannot infer from F 37, as many critics do, that *immediately* after the soul Speusippus posited the sensibles. It is noteworthy that Aristotle here limits his criticism to numbers and magnitudes, which for him are not οὐσίαι, so that there is no need for him to raise the question whether or not the non-existence of soul would affect the existence of bodies. In short, Speusippus in all probability recognized the substantiality of bodies, but it is uncertain whether he placed them immediately after the soul or not.

Aristotle argues that even if numbers do not exist, those who posit the separate existence of mathematical magnitudes would admit that these magnitudes exist, and that even if magnitudes do not exist, nevertheless the soul and the sensibles would exist; and so the Speusippean substances are merely a series of disconnected episodes. This criticism and its implications are discussed elsewhere (cf. pp. 49-51 *supra*); here it is necessary to determine the reason behind it. Aristotle's objection that the Speusippean universe is episodic cannot be due to his contention that if numbers are not causes they are useless (cf. *Metaphysics* 1090 A 7-15 = F 36), an objection that he implicitly extended to magnitudes also (cf. 1090

¹²² On ἡ φύσις ἐπεισοδιώδης οὐσα . . . , ὥσπερ μοχθηρὰ τραγωδία in 1090 B 19-20, cf. 1076 A 1 (= F 30) ἐπεισοδιώδη τὴν τοῦ παντὸς οὐσίαν ποιοῦσιν. For the meaning of "episodic" and its connection with a bad tragedy cf. *Poetics* 1451 B 34-35 λέγω δ' ἐπεισοδιώδη μῦθον ἐν ᾧ τὰ ἐπεισόδια μετ' ἄλληλα οὐτ' εἰκὸς οὐτ' ἀνάγκη εἶναι. It is likely that Theophrastus, *Metaphysics* 4 A 13-14, εὐλογώτερον δ' οὖν εἶναι τινα συναφὴν καὶ μὴ ἐπεισοδιώδεις τὸ πᾶν, is also a critical allusion to Speusippus.

A 35-B 1 = F 36). For it is noteworthy that, whereas he says that those who posit ideas are not liable to the objection of making nature a series of episodes,¹²³ in 1090 B 25-27 he objects to Xenocrates' separate magnitudes with the same contention he brought against Speusippus' mathematics in F 36: they contribute nothing to existing things. Now according to Aristotle Speusippus posited the One and $\pi\lambda\eta\theta\omicron\varsigma$ as the principles of number, and the point, which is similar to the One, and a material similar to $\pi\lambda\eta\theta\omicron\varsigma$ but not identical with it as the principles of magnitude (cf. on F 28, line 9 and on F 29a, 5-8). This relation of similarity between the principles, however, Aristotle does not accept (cf. F 30, F 65, and F 71 with comm. *ad locc.*), and hence his charge of making nature episodic. Since Aristotle treats the Speusippean principles One and point as formal causes, and $\pi\lambda\eta\theta\omicron\varsigma$ and the material similar to $\pi\lambda\eta\theta\omicron\varsigma$ as material causes (cf. F 38, F 39, F 40, F 46a, and F 51), we must inquire to which kind of principles he ascribes the episodic character of the Speusippean universe. The answer is to be inferred from *Metaphysics* 1090 B 20-1091 A 3, since Aristotle there excludes the thinkers he criticizes from the charge of making nature episodic. He distinguishes the doctrine of Xenocrates (1090 B 20-32) from that of Plato (1090 B 32-1091 A 3),¹²⁴ and to both he always ascribes only one material principle (cf. Cherniss, I, pp. 479-487). He does so even here in the case of Xenocrates (cf. 1090 B 21-23: $\pi\omicron\iota\omicron\upsilon\sigma\iota$ γὰρ τὰ μεγέθη ἐκ τῆς ὕλης καὶ ἀριθμοῦ, ἐκ μὲν τῆς δυάδος τὰ μήκη, ἐκ τριάδος δ' ἴσως τὰ ἐπίπεδα, ἐκ δὲ τῆς τετράδος τὰ στερεά), and his objection to Plato in 1090 B 37-1091 A 2 implies that the latter, too, posited only one material principle.¹²⁵ The unavoidable inference, therefore, is that in Aristotle's view it is the plurality of material principles that makes the Speusippean universe a series of disconnected episodes (cf. also on F 51 *infra* and pp. 49-51 with note 246 *supra*).

¹²³ On τοῦτο μὲν ἐκφεύγει (= "this difficulty misses them"), cf. Ross' note on 1090 B 21.

¹²⁴ Cf. Cherniss, I, pp. 568-570 and *idem*, *Gnomon* 31 (1959), pp. 45-48 = *Selected Papers*, pp. 432-435.

¹²⁵ Cf. Cherniss, I, p. 483. He suggests that in 1090 B 37-1091 A 1 one should read ἐξ ἄλλου δὲ τίνος μικροῦ καὶ μεγάλου τὰ μεγέθη ποιεῖ; When so read, 1090 B 37-1091 A 2 contains the same objection as 1001 B 19-25, and in both cases Aristotle ascribes to Plato one material principle (cf. Cherniss, *op. cit.*, pp. 480-481).

F 38

Context. In *Metaphysics* 1092 A 21-B 8, Aristotle asserts that those who say that existing things come from elements and that the first of existing things are the numbers¹²⁶ have failed (a) to distinguish the various senses in which a thing is said to come from another and (b) to explain in which sense number comes from its principles. Aristotle contends that number cannot come from its principles by mixture (μῆξις), because not everything can be mixed, and because the product of mixture is different from its elements; and so the One would not exist apart nor would it be a different entity (sc. from number), as the Platonists think it is. Nor can it come by composition (σύνθεσις), because the elements would have position and because he who thinks of number would be able to think of its elements as two distinct things, the One and multitude; and, if that were so, number would be monad and multiplicity or the One and unequal.¹²⁷ Nor can number come from elements which are still found in the product, for this is the case only with things that are generated. Nor can it come from the elements as from a seed,¹²⁸ since in this way nothing can come from what is indivisible (sc. the One). Nor can it come from its contrary, the contrary not remaining, since what comes from its contrary in this sense presupposes something else that remains. Aristotle then infers that, since the Platonists posited the One and the other principle of number as its contrary (for one thinker posited "multiplicity" as contrary to the One and another the "unequal," treating the One as "equal"), they must have meant that number comes from contraries (ἐξ ἐναντίων). To this Aristotle objects that when things come from two contraries there is something else that remains (namely, the sub-

¹²⁶ That 1092 A 21-B 8 is directed against the Platonists is clear from the fact that Aristotle's criticism presupposes the separate existence of the One and the eternity of number. *Pace* Ross (note *ad loc.*) this passage does not refer primarily to Speusippus, but to the Platonists in general, among whom Aristotle has particularly in mind Plato and Speusippus (cf. note 127 and comm. on F 38, 1 and 1-2 *infra*).

¹²⁷ In 1092 A 28 Aristotle mentions τὸ ἓν and τὸ πλῆθος as the principles of number probably because he thinks that πλῆθος, Speusippus' principle, is closer to the essence of number than the second principle of the other Platonists (cf. on F 39 *infra*). In 1092 A 29 μονὰς καὶ πλῆθος is an allusion to Speusippus (cf. p. 36 with note 178 *supra*) and τὸ ἓν καὶ ἄνισον to Plato (cf. on F 38, 1-2 *infra*).

¹²⁸ Cf. 1092 A 32. Here Aristotle probably has in mind Speusippus (cf. F 42a and F 43).

stratum) from which and from one contrary number is or has come to be. The implication is that either the Platonists have failed to postulate a substratum or that, if they treat the second principle as the substratum, they have failed to posit a contrary to the One.¹²⁹ Furthermore, Aristotle objects, all things that come from contraries, or that have contraries, perish, even if they come from all of the contrary; but number is said to be eternal. The Platonists say nothing about this; and yet the contrary, whether present or not in the compound, destroys it. On these arguments cf. pp. 32-41 *supra*.

1 Ἐπεὶ . . . τίθησιν. This is one of several passages in which Aristotle refers to a philosopher who made the One (τὸ ἓν) and multiplicity or plurality (τὸ πλῆθος) the principles of number. That this is Speusippus' doctrine is to be inferred from the following considerations. In *Metaphysics* 1091 B 22-26 (= F 45a), which is part of a discussion of the difficulties attending those who identify the One with the Good, Aristotle says that some thinkers, who agree that the One is the first principle and element but of mathematical number only (this restriction indicates that Aristotle is referring to Speusippus),¹³⁰ do not identify the One with the Good. A few lines below, in 1091 B 30-35 (= F 45a), Aristotle contends that the identification of the One and the Good is tantamount to identifying the contrary element with evil itself. He reports that because of this difficulty one thinker did not attach the Good to the One, since, generation being from contraries, evil would necessarily be the essence of τὸ πλῆθος. In 1091 A 33-B 1 (= F 44) Aristotle says that

¹²⁹ Ross in his note on 1092 A 34-B 3 thinks that Aristotle's argument in that passage is either a fallacy of four terms or ambiguously expressed. I think, however, that Aristotle's argument in 1092 A 33-B 3 is merely elliptical and that no fallacy is involved, though the argument itself is not cogent against the Platonists. For (a) 1092 A 33-35 rejects the possibility that number comes from its contrary, the contrary not remaining, because this kind of change requires a substratum (cf. *Metaphysics* 1069 B 3-9). Aristotle then (b) *infers* (1092 A 35-B 3, where n.b. ἐπεὶ τοίνυν τὸ ἐν ὃ μὲν τῷ πλήθει ὡς ἐναντίον τίθησιν . . . , ὡς ἐξ ἐναντίων εἴη ἂν ὁ ἀριθμός) that number comes from contraries. To this the objection is that a substratum that remains is required, from which and from one of the contraries number is or has come to be, etc. It seems to me that Ross has wrongly conflated (a) and (b) above.

¹³⁰ Cf. Ross, *Aristotle's Metaphysics*, I, p. lxxiii. The belief in mathematical number only is always ascribed by Aristotle to Speusippus and often contrasted with Plato's two numbers, ideal and mathematical, and with Xenocrates' identification of the two. Cf. on F 29a, F 30-37.

the theologians seem to agree with some contemporary thinkers (τῶν νῦν τισί) who refuse to identify one of the elements of number with the Good, and who maintain that the good and the beautiful appear as a result of natural development. These thinkers were trying to avoid a real difficulty which confronts those who say that the One is a principle and element of number and that it is identical with the Good. All the passages just cited must refer to Speusippus, for in 1072 B 30-34 (= F 42a) Aristotle says that Speusippus and the Pythagoreans denied that supreme beauty and goodness are present ἐν ἀρχῇ, because the principles of plants and animals are also causes but beauty and perfection are in their products (cf. also 1092 A 11-17 = F 43). That the passages reviewed above concerning τὸ ἓν and τὸ πλῆθος as the principles of number refer specifically to Speusippus and not primarily to the Pythagoreans is fairly certain. The thinker who denied the identification of these elements with good and evil, respectively, is a contemporary of Aristotle and a man who allegedly refused to accept the doctrine of those Platonists who made this identification (cf. pp. 41-44 *supra*). Moreover, as the respective contexts of the passages cited show, according to Aristotle the One and τὸ πλῆθος are the principles out of which the *separately* existing numbers are derived. And this cannot be the doctrine of the Pythagoreans, for they, according to Aristotle's testimony, did not "separate" numbers and magnitudes and even conceived the numerical units as spatially extended.¹³¹ Furthermore, the thinker who derived the numbers from the One and multiplicity is said to have generated magnitudes from the point (στιγμή), which he considered to be *similar* to the One, and from a material *similar* to πλῆθος but not identical with it (cf. *Metaphysics* 1085 A 32-34 = F 51). This means that the point has separate existence and that there is a relation of similarity between the

¹³¹ Cf. on F 29a with note 82 there, and esp. *Metaphysics* 1080 A 16-21, 30-33; 1083 B 8-19; 1090 A 20-25, 30-35. In all these passages the Pythagorean conception of numbers which have magnitude is contrasted with those of the Platonists, including Speusippus, who separated number, and who, according to Aristotle, conceived numbers to be composed of *abstract* monads.

It is also noteworthy that in the Pythagorean table of opposites (cf. *Metaphysics* 986 A 22 ff.) ἓν and πλῆθος are not the supreme principles, that according to 986 A 17-21 the elements of number are the even and the odd, and that the one is said to be both even and odd (cf. Cherniss, *Crit. Pres. Philos.*, pp. 225-226 with n. 38), whereas for Speusippus one is the first *odd* number (cf. F 28, lines 18-22 with comm. *ad loc.*).

elements of number and of magnitude; and so the doctrine in question must belong to a Platonist, not to the Pythagoreans, who could not have distinguished the One from the point, since they made sensible things consist of numbers.¹³² Now the Platonist who conceived the point as a self-subsistent entity and thought that it is the principle of magnitudes is, as his own words show, Speusippus. Cf. F 28, line 61 *πρώτη μὲν γὰρ ἀρχὴ εἰς μέγεθος στιγμή* (cf. also on F 52 and F 65).¹³³

1-2 ὁ δὲ . . . ἑξῆς. The designation “unequal” for the second principle shows this to be a reference to Plato. Cf. *Metaphysics* 1081 A 24-25, with Ross’ note on line 24, *Metaphysics* 1087 B 5, with Ross’ note *ad loc.*, and Cherniss, I, p. 480.

F 39

Context. Book N of the *Metaphysics* is devoted to a criticism of the principles of the Platonists. Aristotle contends that they make

¹³² Cf. the passages cited in the previous note. Moreover, Aristotle explicitly says that Plato was the first to “separate” the universal (cf. *Metaphysics* 987 A 29-B 14; cf. also 1078 B 9-32 and 1086 A 31-B 10 with Cherniss, I, pp. 177-198).

¹³³ The existence of the point excludes Plato, who is said to have considered it merely a geometrical dogma (cf. *Metaphysics* 992 A 20-21, Alexander, *In Metaph.*, p. 120, 2-5), and also Xenocrates, who believed in indivisible lines (cf. Xenocrates, frags. 41-49 [Heinze] and Cherniss, I, pp. 14-15 and 128 with n. 81). Moreover, Aristotle reports that after the idea-numbers Xenocrates posited lines and planes, etc. (cf. *Metaphysics* 1028 B 24-27 = F 29a with comm. *ad loc.* and note 85 there). Aristotle ascribes to Xenocrates the One and the Indefinite Dyad as the principles of number (cf. 1081 A 14-15 and 1088 B 28-30 with Ross’ notes on 1081 A 14 and on 1088 B 28-30). Plutarch, *De An. Procr.* 1012 D-E (= Xenocrates, frag. 68 [Heinze]), while explicitly ascribing the name “Indefinite Dyad” to Xenocrates’ material principle, also reports that in reading into Plato’s *Timaeus* his own doctrine of the generation of number, Xenocrates identified ἀμέριστον with τὸ ἓν, and μεριστόν with τὸ πλῆθος. To this unique ascription of τὸ πλῆθος to Xenocrates some scholars attribute very little evidential value (cf. e.g. Robin, *Idées et Nombres*, p. 655; Ross, *Aristotle’s Metaphysics*, II, p. 455), and it is noteworthy that Plutarch’s report seems to come from an intermediate source (cf. Cherniss, *Plutarch’s Moralia*, XIII, i, p. 163, n. e). Nevertheless, since Xenocrates’ system was an attempt to bridge the gap between Plato and Speusippus, it is possible that he indicated that Speusippus’ τὸ πλῆθος was merely a more general term than Indefinite Dyad to designate the material principle. Similarly, he seems to have thought that Plato’s “unequal” was in fact a dyad, i.e. the Indefinite Dyad (cf. Cherniss, I, pp. 85-88 and 480-481). Cf. also Xenocrates, frag. 28 (Heinze) for another possible instance of the connection of πλῆθος with Xenocrates’ material principle. Be that as it may, Aristotle consistently ascribes τὸ πλῆθος to Speusippus.

the principles of unchangeable substances contraries and proceeds to criticize this from the point of view of his own doctrine of the categories and the priority of substance. Since there can be nothing prior to the first principle of all things, the first principle cannot be an attribute of anything else, for an attribute presupposes a subject that is prior to it. But all things that are generated from contraries presuppose an underlying subject of which they are predicated; and, since there is nothing contrary to substance, no contrary can exist apart or be the first principle of existing things (1087 A 29-B 4). In the next passage (1087 B 4-33), where our fragment occurs, Aristotle tries to show that the Platonists made the mistake of positing contraries as the first principles of existing things, one as matter and the other as form, which principles they call elements (στοιχεῖα). His criticism here is directed at the material principle in particular, and he mentions several Platonistic doctrines, though he is mainly concerned with those who like Plato and Speusippus posit the One as the opposite of the material principle. For this reason Aristotle thinks that Speusippus' material principle, τὸ πλῆθος, is closer to the truth than the other Platonistic material principles are; nevertheless, he contends, τὸ πλῆθος is not the contrary of the One. In the next passage (1087 B 33-1088 A 14) Aristotle argues that the One is a measure and an attribute, and so it is not even a number, and cannot be the substance of anything. On these criticisms cf. pp. 32-41 *supra*.

1-10. For τὸ ἓν and τὸ πλῆθος as Speusippus' principles cf. comm. on F 38, 1 *supra*.¹³⁴ On Aristotle's inference that Speusippus' principles are contraries and on his identification of τὸ ἓν with form and τὸ πλῆθος with matter cf. pp. 33 and 37-41 *supra*.

1 [τῷ ἰσῷ]. On the excision of these words cf. Jaeger, *SBBA* 34 (1923), p. 274 = *Scripta Minora*, I, pp. 273-274 and Ross' note on 1087 B 5.

2 τὸ ἄνισον. This is the material principle Aristotle ascribes to Plato, cf. on F 38, 1-2 *supra*.

¹³⁴ Pseudo-Alexander, *In Metaph.*, pp. 796, 32-33 and 797, 11, and Syrianus, *In Metaph.*, p. 166, 18-19 wrongly ascribe Speusippus' principles to Pythagoras.

3-4 γεννῶνται . . . ἀμφοῖν. On Aristotle's view that Speusippus "generates" or "derives" the numbers cf. pp. 40-41 *supra*.

6-10 εἰ . . . ἀντίκειται. If the principles of existing things are contraries, Speusippus' material principle is more plausible than the others, for τὸ πλῆθος comes closer to being the contrary of the One than the unequal (which is contrary to the equal) or the different (which is contrary to the same) or the other (which is contrary to the thing itself). But Speusippus' opinion falls short of the truth in that τὸ πλῆθος is not contrary to the One but to the few, so that the One would be a few. This argument implies that the difficulty of Speusippus' doctrine is not that he posited τὸ πλῆθος as the material principle, but that he posited it as (a) a contrary and (b) contrary to the One. For Aristotle himself believes that number is πλῆθος μονάδων (cf. *Metaphysics* 1053 A 30) but that the One is a measure of number, not a number, and a starting point of it (cf. 1088 A 4-8, where n.b. σημαίνει γὰρ τὸ ἐν ὅτι μέτρον πλῆθους τινός, καὶ ὁ ἀριθμὸς ὅτι πλῆθος μεμετρημένον . . . διὸ καὶ εὐλόγως οὐκ ἔστιν τὸ ἐν ἀριθμός· οὐδὲ γὰρ τὸ μέτρον μέτρα, ἀλλ' ἀρχὴ καὶ τὸ μέτρον καὶ τὸ ἐν). In short Aristotle thinks that Speusippus is closer to the truth than the other Platonists in relating τὸ ἐν and τὸ πλῆθος to the essence of number, but that he is wrong in thinking that they are contraries and that as such they are the elements of number. Cf. also *Metaphysics* 1057 A 3-6 and pp. 35-37 and 38-41 *supra*.

9 τινος δόξης. = "Something that can really be called an opinion," cf. Ross' note on 1087 B 31.

F 40

Context. After a lengthy critique of Plato's and Xenocrates' separately existing numbers (1083 B 23-1085 A 7), Aristotle asserts that similar difficulties occur with regard to magnitudes. He then refers to, and criticizes (1085 A 9-23), a theory that posits a plurality of material principles even for the several kinds of magnitudes. *Pace* Ross (in a note to his translation which contradicts his own comm. on 1085 A 9), this theory is not that of Plato, nor that of Xenocrates either, for to both Aristotle ascribes only one material principle (cf. on F 37, lines 1-7). It is an anonymous Platonistic doctrine to which Aristotle refers several times (cf. also 992 A 10-20, 1087 B 16-17, 1089 B 9-15, Cherniss, I, pp. 481-482 and 483-484),

and which posited a plurality of material principles. In this it is similar to Speusippus' system, but it differs from it in that it posited a plurality of material principles for the several kinds of magnitudes (one for lines, one for planes, and one for solids), whereas Speusippus posited a single material principle for all magnitudes (something similar to $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$ but different from it, cf. F 51 with comm. *ad loc.*). Before the discussion of Speusippus' theory, however, there occurs a parenthetical passage (1085 A 23-31) where Aristotle brings against the several Platonistic theories that separate the numbers and the One a difficulty which was originally an argument against the ideas as such and which in all probability Speusippus himself had so used (cf. pp. 70-72 *supra*). Aristotle then criticizes Speusippus for failing to explain how magnitudes can be derived from the principles he posits. Since, however, the principles of magnitude are in Speusippus' view similar to the principles of number, Aristotle proceeds to criticize the latter at length (1085 B 4-27) in order to show that the difficulties with Speusippus' derivation of magnitudes are similar to those attending the derivation of numbers from the One and $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$. Then in 1085 B 27-34 Aristotle returns to Speusippus' magnitudes and criticizes him for his alleged derivation of magnitudes from the principles. The passage concerning numbers (1085 B 4-27), which is the counterpart of the critique of Plato and Xenocrates in 1083 B 23-1085 A 7, is discussed here as F 40, whereas the lines which deal with magnitudes (1085 A 32-B 4 and 27-34) constitute F 51.

1-19. This is a refutation of Speusippus' derivation of numbers, for $\tau\omicron\ \epsilon\nu$ and $\tau\omicron\ \pi\lambda\tilde{\eta}\theta\omicron\varsigma$ are the principles Aristotle ascribes to him (cf. on F 38, 1 *supra*).¹⁸⁵ His objections are three. I (1085 B 4-12 = lines 1-7): Speusippus has failed to explain how number comes from the One and multiplicity. However he expresses himself, the difficulties confronting him are the same as those which confront those who derive number from the One and the Indefinite Dyad (cf. 1082 A 20-26); is it by mixture, or position, or blending, or generation, etc. The implication is that all such views are impossible (cf. also 1092 A 21-B 8 and introductory note to F 38 *supra*). Aristotle tries here to minimize the difference between $\tau\omicron\ \pi\lambda\tilde{\eta}\theta\omicron\varsigma$ and the

¹⁸⁵ Pseudo-Alexander, *In Metaph.*, p. 780, 15-17 ascribes Speusippus' principles to $\delta\lambda\lambda\omicron\varsigma\ \tau\iota\varsigma\ \tau\omicron\omega\nu\ \Pi\upsilon\theta\alpha\gamma\omicron\rho\epsilon\iota\omega\nu$. Syrianus, *In Metaph.*, p. 158, 34 to the Pythagoreans (cf. also note 134 *supra*).

Indefinite Dyad, and contends that the former is a universally predicated plurality while the latter is a particular plurality, since two is a first plurality. It is noteworthy, however, that in 1087 B 26-33 (= F 39) Aristotle points out the superiority of τὸ πλῆθος over the several other Platonistic material principles.

Whereas the first objection is aimed at the derivation of number from the principles, the second and third are particularly intended to show that multiplicity cannot be the material principle; and so Aristotle shifts from number to the comparable and undifferentiated monads of Speusippus' separately existing mathematical numbers. II (1085 B 12-22 = lines 7-16): The main objection is, from what does each monad come. Each is different from the One itself, and so it must come (a) from the One itself and multiplicity or (b) from the One itself and a part of multiplicity. From Aristotle's objections against these two possibilities it is clear that by multiplicity *tout court* he means an indefinite multiplicity, and by "a part of multiplicity" monads; and so the latter kind of multiplicity is constituted by discrete and indivisible parts. Against (a) he contends that it is impossible that the monad be some kind of multiplicity, for it is indivisible. The implication seems to be that if the monad comes from the One and indefinite multiplicity (i.e. multiplicity as such), then the monad must itself be divisible, as one of its elements is, and this is impossible by definition (cf. also under III *infra*). But if one claims that the monad comes from the One and a part of multiplicity (b), many difficulties follow: (i) For it is necessary that each of the parts (sc. of multiplicity) be indivisible (i.e. that each monad be indivisible; otherwise, it would be divisible as in II, a) ¹³⁶ and that the One and multiplicity not be the elements (since each such monad could not come from multiplicity and the One). The implication is that, since each monad is already a monad in the multiplicity, it cannot come from it at all. Hence the One and multiplicity are not the elements of the monads. This leads to the

¹³⁶ Some critics (e.g. Tricot, Reale, etc.) have gone wrong in their interpretation of 1085 B 12 ff. because they have accepted Robin's notion (*Idées et Nombres*, p. 377) that the μορίου τοῦ πλῆθους of 1085 B 15 refers, among other things, to the Indefinite Dyad. Aristotle's argument shows, however, that by "a part of multiplicity" he means the discrete and indivisible monads (cf. esp. 1085 B 18-19 and 20-21) which constitute the πεπερασμένον πλῆθος of 1085 B 24-25. The attempt to minimize the difference between multiplicity and the Indefinite Dyad is limited to objection I (1085 B 4-12).

next objection (ii): He who says this, namely, that multiplicity is an element and that each of its parts is indivisible, does nothing but presuppose another number, for a plurality of indivisibles *is* number (cf. 1053 A 30 ὁ δ' ἀριθμὸς πλῆθος μονάδων, with comm. on F 39, 6-10 *supra*). And so multiplicity is not an element. This second argument against II, *b* leads to objection III (1085 B 23-27 = lines 16-19): Also in the case of Speusippus (sc. as in that of the partisans of idea-numbers, cf. 1083 B 36-37) one must ask whether number is finite or infinite. The implication is that Speusippus' number must be finite or infinite, since it is said to have separate existence (cf. 1083 B 37-1084 A 1). Now if number is finite, i.e. if there is a finite number of monads, the monads must come from the One and from definite multiplicity. For it seems, Aristotle says, that there was also a definite multiplicity from which and from the One the indivisible monads come (cf. II, *b*, i and ii *supra*). On the other hand, if number is infinite or indefinite, the component units are infinite and must come from the One and from infinite or indefinite multiplicity. The argument in this section presupposes Aristotle's notion that, since an indefinite or infinite multiplicity cannot have *actual* existence, it cannot consist of *actual* monads. Hence, if this multiplicity were the element of number, the monads would be divisible (cf. II, *a supra*). Which kind of multiplicity is it, then, that, together with the One, is the element of number? Since Aristotle considers that he has already refuted both these possibilities (cf. II, *a-b*), the implication is that multiplicity is not at all an element of number.¹³⁷ On the validity of these arguments cf. pp. 32-41 *supra*.

¹³⁷ Ross (note on 1085 B 23) is wrong in thinking that the question of 1085 B 23-24 is not quite the same as that of 1083 B 36-37 because 1085 B 23-24 concerns the number which the original πλῆθος was shown to be (cf. 1085 B 22). For objection III (1085 B 23-27) is directed against deriving *number as such* from either a finite or an infinite multiplicity, and it is noteworthy that in order to face Speusippus with this dilemma Aristotle here assumes the validity of his own inference in 1085 B 21-22 (cf. 1085 B 24-26 ὑπῆρχε γάρ, ὡς ἔοικε, καὶ πεπερασμένον πλῆθος, . . . ἔστι τε ἕτερον αὐτὸ πλῆθος κτλ.). Moreover, the question raised in 1085 B 23-24 is the same as that of 1083 B 36-37; but Aristotle is not here interested in pressing against Speusippus' number the arguments used against the idea-numbers in 1083 B 36 ff. (though he could have done so), because he is concerned with refuting Speusippus' material principle. And his argument in 1085 B 23-27 presupposes that Speusippus' number must also be finite or infinite. (On the text and punctuation of 1085 B 4-27 cf. Ross' notes.)

F 41

Context. *Metaphysics* 1091 A 12-29 is preceded by a lengthy discussion of the views of Speusippus, Xenocrates, and Plato concerning numbers and magnitudes (cf. 1090 A 2-1091 A 12), where most of Aristotle's criticism has been directed against Speusippus (cf. the introductory note to F 36). It is therefore very likely that the objection Aristotle raises in 1091 A 12-13—that it is paradoxical, or rather impossible, to ascribe generation to things that are eternal—refers to the three philosophers named above. What causes confusion is that in trying to prove that, despite the Platonists' denial, they do in fact ascribe generation to eternal things, Aristotle asserts (a) that these thinkers say there is no generation of odd numbers and (b) that they present the even as first produced from unequals, namely the great and the small. Since these two objections refer to Xenocrates and Plato (cf. on lines 10-12) but not to Speusippus, it would seem that Aristotle did not mean him to be included among the Platonists he criticizes in 1091 A 12-13 and 20-29. But in 1092 A 21-B 7 (cf. on F 38 *supra*) Aristotle refers to Speusippus when he tries to prove that the Platonists generate the numbers out of the principles they posit as elements. Moreover, it is reported that Speusippus said that eternal things, i.e. the mathematical, are "generated" only for the sake of knowledge (cf. on lines 14-15 *infra*). These two facts show that he must have been included among those to whom Aristotle denies the defense of generating numbers τοῦ θεωρῆσαι ἔνεκεν.

1-2 Ἄτοπον . . . ἀδυνάτων. It is clear from lines 7-15 not only that the Platonists did not generate the numbers but that they explicitly denied them generation. And it is noteworthy that Aristotle is trying to *prove* that they must have generated the numbers. Cf. also his similar inference in 1092 A 35-B 2 (= F 38). Cf. the introductory note to F 38, with note 129 there.

2-7 οἱ . . . μεθόδου. It is typical of Aristotle's polemical method to bring in the Pythagoreans for the purpose of comparing them with the Platonists. He does so here apparently to reinforce his argument that his predecessors generated the numbers. Yet in saying that in the case of the Pythagoreans πότερον οὐ ποιοῦσιν ἢ ποιοῦσι γένεσιν οὐδὲν δεῖ διατάζειν· φανερῶς γὰρ λέγουσιν ὡς τοῦ ἐνδὸς συσταθέντος, he tacitly admits that he has no such evidence about

the Platonists. His inference concerning the latter thinkers is the more suspect, since he is probably wrong in contending that the Pythagoreans generated the One (cf. Cherniss, *Crit. Pres. Philos.*, pp. 38-39). *Pace* Ross (in his note on 1091 A 15-18), Aristotle is not referring here to the generation of solids by "fluxion" from planes, of planes from lines, and of lines from points. This doctrine is not in any case Pythagorean but must be ascribed to Speusippus, since it presupposes the substantial existence of the point (cf. on F 28, lines 60-62; F 50, F 51, and F 52). On lines 2-7 cf. also note 139.

10-12 Τοῦ . . . ἰσασθέντων. From the fact that the Platonists allegedly denied that odd number is generated, Aristotle infers that there is generation of the even. And he proceeds to prove his point by taking literally the derivation of even number from the great and small (cf. lines 12-14), which begs the point at issue, since the Platonists claimed that the generation of numbers was "for the sake of knowledge." Now the subject of οὗ φασι cannot be Plato, since in 987 B 33-988 A 1 Aristotle says that from a dyad Plato naturally (εὐφυῶς) generated the numbers, except the prime numbers. This implies that the prime numbers could also be derived but not derived εὐφυῶς from the dyad (cf. Cherniss, I, n. 106). In 1091 A 9-12 Aristotle contends that from the great and the small only the even numbers could be derived, but implies that the odd numbers were also so derived (a feature of Plato's theory). Since in 1083 B 29-30 and 1084 A 36-37 he refers to a Platonistic theory of idea-numbers that made the one itself the middle unit in the odd number, and since in all probability this was the doctrine of Xenocrates, we may infer that he is probably the Platonist who said that there is no generation of odd number. It is likely that Xenocrates modified Plato's theory (or his own original interpretation of it) in the light of Aristotle's criticism in such passages as 1091 A 9-12. The τινές of line 11, however, must refer to Plato or to Plato and others, for it is to him that Aristotle ascribes the great and the small as the material principle of numbers (cf. note 125 and on F 38, lines 1-2 *supra*). But since it is said elsewhere that Plato generated the numbers, including the odd numbers, it is likely that Aristotle is here referring to Xenocrates' own theory which, as is usual with him, he probably put forward as an interpretation of Plato. For it is noteworthy that the defense of generating numbers τοῦ θεωρεῖσθαι ἔνεχεν is probably not Plato's, but is attested for Speusippus and

Xenocrates (cf. the references in comm. on lines 14-15 *infra*), and that it was probably Xenocrates who interpreted “the unequal” as equivalent to “the great and small” (cf. note 133).

14-15 ὥστε . . . ἀριθμῶν. Pseudo-Alexander, *In Metaph.*, pp. 819, 37-820, 3 refers to Xenocrates in connection with τοῦ θεωρησάι ἐνεκεν. But, as it was argued in the introductory note to this fragment, Speusippus was too, most probably, in Aristotle’s mind here. Cf. F 72, lines 9-11 οὐ ποιητικῶς ἀλλὰ γνωστικῶς ὁρῶμεν ὡσανεὶ γιγνόμενα λαμβάνοντες τὰ ἀεὶ ὄντα (with comm. on F 72-74) and F 61a-b with comm. *ad loc.*

F 42a

Context. In *Metaphysics* Λ. 7, 1072 A 19-B 30, Aristotle draws several conclusions from his discussion in the previous chapters of book Λ. He maintains that there is a separate and unchangeable substance and that this is the unmoved mover, who is pure actuality and the final cause of the universe; it therefore exists of necessity, and so it is good and is a first principle. This substance, on which the first heaven and the whole of nature depend, is god, and he leads the best life, that which consists in thinking which is identical with its object. Aristotle’s conclusion in 1072 B 28-30 is: φαμὲν δὴ τὸν θεὸν εἶναι ζῶν ἀίδιον ἄριστον, ὥστε ζωὴ καὶ αἰὼν συνεχῆς καὶ ἀίδιος ὑπάρχει τῷ θεῷ· τοῦτο γὰρ ὁ θεός. Since god is supremely good and the first principle of the universe, Aristotle at once tries to refute the Pythagoreans and Speusippus who denied goodness to the first principle.

1-7. Aristotle here explicitly ascribes to Speusippus the doctrine that supreme beauty and goodness are not present ἐν ἀρχῇ, and so this fragment enables us to identify other similar references to him in passages where he is not named (cf. F 43, F 44, F 45a, F 46a).

The context implies that by ἀρχή here Aristotle means the highest principle, but the argument Speusippus advanced in support of his view shows that he denied goodness to his other principles as well. This highest principle in Speusippus’ system Aristotle considers to be the One (cf. on F 29a). The occurrence of the superlatives κάλλιστον and ἄριστον, however, does not mean that Aristotle understood Speusippus to have denied supreme beauty and goodness to his first principle but to have admitted that good and beauty

are meaningful predicates of it. Rather, Aristotle mentions τὸ κάλλιστον καὶ ἄριστον because this is what he himself ascribes to the unmoved mover; but Speusippus denied that goodness and beauty are present in the principles at all (cf. also on F 43 with note 143 there, on F 44, 6-10 and on F 45a, 5-8 *infra*). This is to be inferred from the biological argument Aristotle here ascribes to him, namely, that also the ἀρχαί of plants and animals are causes, but that the beautiful and perfect is not in the principles but in their products.¹³⁸ Aristotle cites this same argument in 1091 A 31-36 (= F 44), where he states that Speusippus thought the good and the beautiful are later than the principles and elements and are the result of natural development. Consequently, beauty and goodness are not present in any of the principles at all. Since numbers and magnitudes are for Speusippus *eternal* and *separate* entities, and since there is no goodness and beauty in their ἀρχαί, there can be none in them either; for there is no development in numbers and magnitudes (as there is in plants and animals). F 42a and F 44, too, are therefore decisive evidence against the view of Merlan and others who think that Speusippus admitted the presence of the beautiful at the level of his separately existing mathematical (cf. on F 44, 4-6 *infra*).

Aristotle's mention of the Pythagoreans here may be due to the fact that Speusippus himself referred to them in connection with this doctrine of his because he wished to emphasize the Pythagorean origin of his own views (cf. Frank, *Plato*, pp. 242-243 and 376, n. 342; Cherniss, *Crit. Pres. Philos.*, p. 241, n. 111). But it cannot be excluded that Aristotle himself here connected the Pythagoreans with Speusippus (cf. on F 47a *infra*). Be that as it may, two things are noteworthy: (a) In 1092 A 11-17 (= F 43) and in 1091 A 29-B 3 (= F 44; cf. *ad loc.*) Aristotle ascribes the same biological argument to Speusippus only. (b) In 1091 B 22-26 and 30-35 (= F 45a) he implicitly refers only to Speusippus as the thinker who refused, in opposition to the other Platonists, to attach good and evil, respectively, to his pair of contrary principles (cf. on F 38, line 1). In short, it is doubtful that the Pythagoreans thought the good is the result of a process of development. And the analogy

¹³⁸ Reale, *La Metafisica*, II, p. 290, n. 34 is mistaken in thinking that according to Speusippus plants and animals are more beautiful and more perfect than the seed, for the text plainly says that there is *no* goodness and beauty in the ἀρχαί. This biological argument was advanced by Speusippus as an analogy, cf. on F 43 *infra*.

between seed and ἀρχή is typically Speusippean and not elsewhere attested for the Pythagoreans.¹³⁹

Speusippus' notion that there is no goodness and beauty ἐν ἀρχῇ Aristotle considers to have been tacitly refuted by the arguments he has put forward in favor of the existence of the unmoved mover as the final cause of the universe (cf. the introductory note to this fragment and also 1075 A 36-37 = F 46a). But Speusippus' analogical argument that in plants and animals beauty and perfection are the result of development and are not present in the principles Aristotle refutes on the basis of his doctrine of the priority of actuality over potentiality. He argues that the sperm comes from what is perfect, that not the sperm but what is perfect is prior, for the sperm comes from man, the imperfect from what is perfect (cf. 1049 B 17-27). On the validity of this criticism cf. pp. 41-42 *supra*.

F 42b-d

It is ostensible that none of the three commentators has any knowledge of Speusippus' doctrine independent of what Aristotle himself says in F 42a.

F 43

Context. In *Metaphysics* N.4, 1091 A 29 ff. Aristotle offers a lengthy critique of the several contrary principles posited by the Platonists on the ground that these philosophers have failed to account for the relation of the principles and elements to the good and the beautiful (1091 A 29-31). After raising a series of objections in 1091 A 31-1092 A 5, several of which are aimed at Speusippus (cf. 1091 A 29-B 3 = F 44; 1091 B 16-19; 1091 B 22-26 and 30-35 = F 45a), Aristotle points out the weak points of the several Platonistic doctrines (1092 A 5-8): the difficulties are due (a) partly to the fact that the Platonists make every principle an element; (b) partly to their making the contraries principles; (c) partly to their making the One a principle; (d) partly to their treating the numbers as first substances, as separately existing, and as ideas.

¹³⁹ Pace Ross, *Aristotle's Metaphysics*, II, p. 484, Elders, *Aristotle's Theology*, pp. 202-203 with n. 201, and others, there is no evidence that the early Pythagoreans used the analogy of the seed or sperm. In *Metaphysics* 1091 A 16 εἴτ' ἐκ σπέρματος is Aristotle's own suggestion, as the words that follow (εἴτ' ἐξ ὧν ἀποροῦσιν εἰπεῖν) indicate.

All these objections concern the Platonists in general, including Speusippus, except that he is not obnoxious to that of making the numbers ideas, since he denied the separate existence of ideas and did not identify them with numbers (cf. F 29a, F 30-36). Aristotle further contends (1092 A 9-11) that, if it is equally impossible not to put the good among the first principles (1092 A 9: a critical reference to Speusippus, cf. F 42a, F 44, F 45a, F 46a) and to put it among them as the other Platonists do (i.e. identifying the good and the One), it follows that neither the principles nor the first substances are being correctly described. Thereafter (1092 A 11-17 = F 43) Aristotle criticizes the biological analogy which Speusippus advanced in support of his doctrine that the good is not found among the first principles. On Aristotle's criticisms of Speusippus in 1091 A 29-1092 A 17 cf. pp. 41-44 *supra*.

1-5. If we compare these lines with F 42a, it is clear that Aristotle is here criticizing Speusippus.¹⁴⁰ This text plainly states that Speusippus' biological argument was put forward as an analogy in support of his denying beauty and goodness to the highest principles. Cf. also 1072 B 32-34 (= F 42a): διὰ τὸ καὶ τῶν φυτῶν καὶ τῶν ζώων τὰς ἀρχὰς αἴτια μὲν εἶναι τὸ δὲ καλὸν καὶ τέλειον ἐν τοῖς ἐκ τούτων ("on account of the fact that also the principles of both plants and animals are causes, but the beautiful and perfect is in their products"). Aristotle's refutation of this biological argument here is the same as that he gave in F 42a (cf. *ad loc.*).

The text speaks of αἱ τοῦ ὅλου ἀρχαί only because Aristotle here sees Speusippus' doctrine from his own point of view (his highest ἀρχή, the unmoved mover, is the final cause of the universe). But the implication of Speusippus' argument is that he denied beauty and goodness to all his principles (cf. also on F 42a), including those of his highest entities, numbers and magnitudes. It is noteworthy that Aristotle himself says διὸ καὶ ἐπὶ τῶν πρώτων οὕτως ἔχειν φησίν, and that he then proceeds to draw an inference about the One itself (cf. also F 44, F 45a, and F 46a for Speusippus' refusal to identify the One with the good).

¹⁴⁰ Neither the Pseudo-Alexander (*In Metaph.*, p. 824, 12-24) nor Syrianus (*In Metaph.*, pp. 185, 29-186, 14) identify the author of this doctrine in their comments on this passage, although Aristotle has explicitly ascribed it to Speusippus in 1072 B 30-34 (= F 42a) and the former commentator has paraphrased that passage (cf. F 42b).

If Aristotle's report is trustworthy, Speusippus said that it is from things "indefinite and imperfect" (= the ἀρχαί) that the more perfect always come. Aristotle's objection is that, if this were so, the One itself, being indefinite and imperfect, would not even be an entity (ὄν τι). That the clause ὥστε μηδὲ ὄν τι εἶναι τὸ ἐν αὐτό is merely an inference of Aristotle, which need not represent Speusippus' own opinion at all, ought to be clear from the grammar. For this clause is of *intended*, not of actual result. Had εἶναι been an infinitive in indirect statement depending on φησὶν, the negative would have been οὐδέ, not μηδέ.¹⁴¹ Consequently, it is only because they neglected the syntax of this clause that some scholars (e.g. Ravaisson, p. 13; Merlan, *From Platonism*², pp. 104-106; Burkert, *Lore and Science*, p. 64, n. 64; Krämer, *Ursprung*, pp. 32, 60, 209, 212, 351-353) have cited the words in question as evidence that Speusippus' One is ὑπερούσιον, and that others have taken them to mean that the One is ἀνούσιον (e.g. Zeller, II, i, p. 1000, n. 1; Robin, *Idées et Nombres*, p. 510; Armstrong, *Architecture of Intelligible*, p. 22; H.-R. Schwyzer, "Plotinos," *RE* XXI [1951], col. 559).¹⁴² Aristotle's argument here is merely a *reductio ad absurdum*. For him any entity in so far as it has "form" has also a certain "perfection" and is "good." He takes Speusippus' One to be the formal cause and the element of number, and so he here faces him with the objection that, if the One were not "perfect" and "definite," it would not even be an entity at all.¹⁴³ For Speusippus, however, the One as the principle of number is the same as the number one. It is there-

¹⁴¹ Some scholars, e.g. Krische, *Forschungen*, p. 253, n. 1 and Ross in his note on 1092 A 13-15, say that this sentence is probably an inference of Aristotle, but they say nothing about the fact that its syntax shows it is merely an inference. It is at the very least ambiguous and misleading to translate this clause of intended result as "so that the One itself is not even an existing thing" (Ross; similarly Annas).

¹⁴² Dodds, *CQ* 22 (1928), p. 140 seems to hesitate between these two interpretations, for he says: "Aristotle appears to credit him (sc. Speusippus) with the view that the One is ὑπερούσιον, or at any rate ἀνούσιον."

¹⁴³ Aristotle's argument here (cf. also on F 42a) implies that Speusippus denied not only that the good is identical with the One but also that goodness can be a meaningful predicate of the One at all. Otherwise Aristotle could hardly have argued that the One would not even be an entity unless it had "perfection" and hence, from Aristotle's point of view, "goodness." It is noteworthy that in F 43 Aristotle's report about Speusippus' biological analogy and Aristotle's own argument against it are the same as those found in F 42a, and this is an indication that in these contexts "perfection" and "goodness" are used as equivalent terms.

fore an entity. But goodness requires a process of natural development, and so it appears only among living beings and is not to be found among numbers and magnitudes. In short, Aristotle's objection is based upon the necessary implications of Speusippus' doctrine as interpreted from the point of view of his own teleological conception (cf. pp. 33-44 *supra*).

It is even possible that Speusippus did not say that the One is "indefinite and imperfect" but that this is merely an inference on the part of Aristotle. It is noteworthy that Speusippus could not have meant literally to say that the numbers come from their principles in the same, or in a similar, way as living beings come from the seed or sperm, since numbers are eternal entities (cf. e.g. F 31). The biological argument he advanced was clearly an argument from analogy (cf. εἰ τις παρειμάζει τὰς τοῦ ὄλου ἀρχὰς τῇ τῶν ζώων καὶ φυτῶν), and the analogy cannot be pressed for the reason just given (cf. also on F 42a). Therefore the words ὅτι ἐξ ἀορίστων ἀτελῶν τε αἰεὶ τὰ τελειότερα may accurately represent what Speusippus said about living beings and their ἀρχαί, but not what he said about number and the ἀρχαί of number. Aristotle's words διὸ καὶ ἐπὶ τῶν πρώτων οὕτως ἔχειν φησὶν may be in part his own inference from the biological analogy and from the fact that Speusippus asserted that goodness and beauty, which for Aristotle are equivalent to "perfection" (cf. note 143), are not to be found among the ἀρχαί (cf. F 42a) but appear as the result of *natural development* (cf. 1091 A 33-36 = F 44).

F 44

Context. In *Metaphysics* N.4, 1091 A 29-1092 A 21 Aristotle raises a series of objections against the several ways in which different Platonistic doctrines conceive the relation of the first principles to the good. He also mentions the opinions of the "theologians" and ancient poets, on the one hand, and of Pherecydes, the Magi, Empedocles, and Anaxagoras, on the other; in the former he finds a possible antecedent to Speusippus' doctrine and in the latter to his own. The immediate context of F 44 is 1091 A 29-B 22. The difficulty according to Aristotle is this: whether (a) any of the principles and the elements is such a thing as what we mean by the good itself and the best or (b) this is not so, but these are later in origin than the elements and the principles (1091 A 29-33). The latter is the view of Speusippus, who thought that the good and

the beautiful are not present in the principles but appear as the result of natural development (cf. 1091 A 33-36 and also F 42a and F 43). With this doctrine the theologians and ancient poets (cf. Ross on 1091 A 34 and B 4) seem to agree in so far as they say that not the first in time, e.g. Night and Sky, or Chaos, or Ouranos,¹⁴⁴ reign and rule but Zeus. They spoke so, however, only because they conceived the rulers of the universe as changing; that is to say only because the present ruler of the universe, being later born, must be the best, or at any rate better than those who ruled before him (cf. 1091 B 4-8 and the implication of 1091 B 8-10), not necessarily because they denied goodness to the supreme principle.¹⁴⁵ Since he wishes to find a precedent for his own doctrine of the priority of the final cause (cf. also 1072 A 4-6), Aristotle maintains that some, such as Pherecydes and others, who do not explain all things mythologically, make the first generating agent the best, and so do also the Magi and some of the later sages, such as Empedocles and Anaxagoras: the former makes love an element, the latter makes mind a principle (1091 B 8-12).¹⁴⁶ But of those who say that there are unchangeable substances, i.e. of the Platonists,¹⁴⁷ some say that the One itself is the good itself, but think that the essence of the first principle consists mainly in its unity (1091 B 13-15). Among these thinkers Plato and Xenocrates are included.¹⁴⁸ Aristotle then (1091 B 15-22) reformulates the difficulty (ἀπορία) he had raised in 1091 A 29-33 in the light of his criticism in 1091 B 1-3: He first rejects Speusippus' doctrine because he refused to

¹⁴⁴ On the thinkers referred to in 1091 B 4-6 cf. Ross' notes on 1091 B 5 and 6; Cherniss, *Crit. Pres. Philos.*, p. 171, n. 118.

¹⁴⁵ Since in 1091 B 4-8 Aristotle rejects the analogy between Speusippus' doctrine and that of the theologians, it is probable that Speusippus himself cited the theologians and ancient poets in support of his view that the good is not to be seen in the first principles but is later than them in origin, cf. Frank, *Plato*, p. 242.

¹⁴⁶ Cf. Cherniss, *Crit. Pres. Philos.*, pp. 196, n. 211 and 223, n. 26.

¹⁴⁷ *Metaphysics* 1091 B 13 refers only to the Platonists, not to the Platonists and the Pythagoreans, as Ross says in his note *ad loc.* For the Pythagoreans did not separate numbers and magnitudes, cf. the introductory note to F 29a and on F 38, line 1 *supra*.

¹⁴⁸ Ross, in his notes on 1091 A 37, 1091 B 13, and 1091 B 20 says that 1091 B 13-15 alludes only, or mainly, to Plato. But Aristotle consistently excludes only Speusippus from the Platonists who are said to have identified the One and the good (cf. Cherniss, I, pp. 84-88, notes 59, 62, and 176, and pp. 381-383 with notes 300 and 301); and so Xenocrates, too, must have been meant to be included in this group (cf. Ross' own note on 1090 B 35).

attach goodness to the first, eternal, and self-subsistent principle (1091 B 16-20).¹⁴⁹ He then dismisses the other Platonists because they identified the good with the One or, if not that, made the first principle an element and an element of numbers (1091 B 20-22). On the validity of these arguments against Speusippus cf. pp. 41-44 *supra*.

4-6 ἡ οὖν, . . . ἐμφαίνεσθαι. If we compare this passage with F 42a, where he is explicitly named, we can say with certainty that these lines refer to Speusippus. *Pace* Ross (cf. his comm. on 1091 A 34, contradicted by Ross himself in a note to his translation), τῶν νῦν τισίν cannot refer also to the Pythagoreans, for these must be contemporary Platonists who, according to Aristotle's own testimony, opposed the identification of the One with the good that he ascribes to Plato and others (cf. 1091 A 36-B 3 [= F 44, lines 6-10], 1091 B 22-1092 A 5 [= F 45a], and on F 38, line 1 *supra*; on the explicit ascription of this doctrine to Plato cf. 988 A 7-15). Nor does the plural here mean that Aristotle is referring to more than one thinker, since it is proved to be purely allusive by 1091 B 32 (cf. on F 45a, lines 1-4 *sub finem* and Cherniss, *Gnomon* 31 [1959], p. 40, n. 2 = *Selected Papers*, p. 427). And it is also noteworthy that in F 44 Speusippus' predecessors are the theologians and poets of old (cf. also Robin, *Idées et Nombres*, p. 511, n. 1 who, however, fails to see that τῶν νῦν depends on τισίν and cannot go with θεολόγων at all [cf. on F 38, line 1]), not the Pythagoreans (cf. note 145 *supra*).

We learn here that Speusippus believed the best and the good to be "ὕστερογενῆ" and the good and the beautiful to appear only after the nature of things has gone forward. We must therefore infer that he denied not only that goodness and beauty are to be found among the principles but also that they are present in numbers and magnitudes. For beauty and goodness are the result of a process of development, and so they cannot be found among eternal and unchangeable entities (cf. also on F 42a and F 43). In view of Aristotle's statement προελθούσης τῆς τῶν ὄντων φύσεως καὶ τὸ ἀγαθὸν καὶ τὸ καλὸν ἐμφαίνεσθαι (cf. also on F 42a), it is purely

¹⁴⁹ Annas' objection (*Aristotle's Metaphysics M and N*, p. 214) that in 1091 B 16-20 "it is not made clear what the connection is between goodness and properties like being eternal and being self-sufficient" is not cogent, since Aristotle has already proved these points to his own satisfaction in *Metaphysics* Λ. Cf. esp. 1072 A 19-B 30, with the introductory notes to F 30 and F 42a.

arbitrary to claim (as Merlan, *From Platonism*², pp. 115-116, Krämer, *Ursprung*, pp. 213-214 and others do) that Speusippus admitted the presence of beauty in the realm of his separately existing mathematical. Nor does προελεύσεως τῆς τῶν ὄντων φύσεως imply "procession" or πρόοδος at all (so Krämer, *op. cit.* and others). These words are probably due to the analogy Speusippus himself saw between the first principles and those of plants and animals. He seems to have used this analogy as an *a fortiori* argument to support his denying goodness and beauty to the highest principles, since even in plants and animals beauty and goodness are found not in the principles but in their products (cf. on F 42a and on F 43).¹⁵⁰ This doctrine implies no "procession" or evolution at all, but only that goodness and beauty appear in living beings as a result of biological development. Speusippus did not derive his "lower" οὐσίαι from the higher, as is to be inferred from the fact that he posited different principles for each kind of substance (cf. F 29a and F 30, and the implications of F 37). Cf. also pp. 51-52 *supra*.

6-10 τοῦτο . . . ἐνός. Speusippus denied the predicate "good" to his first principle, the One, in order to avoid a real difficulty confronting those who say, as some Platonists do, that the One is a principle, that goodness belongs to it, and that the essence of the good consists preeminently in its unity (cf. 1091 B 13-15).¹⁵¹ The difficulty Speusippus sought to avoid is explained in 1091 B 22-25 and 30-35 (= F 45a): he refused to attach goodness to the One in order to avoid identifying the contrary principle with evil itself. Against Speusippus Aristotle here argues that the difficulty does not consist in attaching goodness to the first principle but in making the One a principle and a principle which is an element of number. Also here Aristotle's argument implies that Speusippus denied not only the identification of the One with the good but also that goodness can be a predicate of the One at all (cf. also on F 42a, on F 43 with note 143 there, and on F 45a, lines 5-8).

F 45a

Context. In *Metaphysics* 1091 A 33-B 19 (cf. on F 44 *supra*), Aristotle unfavorably contrasts Speusippus' refusal to predicate

¹⁵⁰ Against Jones' misinterpretation of these words cf. note 196.

¹⁵¹ On Zeller's conjecture of a lacuna in 1091 B 14 before οὐσίαν μέντοι κατλ. cf. on F 47a with note 153 there.

goodness of his first principle with the doctrine of those Platonists who identify the One with the good, for they at least admit that goodness must belong to the first principle. Even in that passage, however, Aristotle asserts that Speusippus was trying to avoid a real difficulty confronting those who identify the One with the Good. In 1091 B 19-22 Aristotle criticizes this identification because, though the notion that the first principle is good is a reasonable one, it is impossible for this principle to be the One or, if not that, to be an element and an element of number. Thereafter (1091 B 22-1092 A 5) he raises four main objections against the Platonists who identify the principles with good and evil. The first two objections are directed at the identification of the One with the good, whereas the last two are against the identification of the contrary principle with evil. Now it is Speusippus' doctrine that is viewed in a favorable light. The objections in question are: (a) If one posits the One as an element of number and identifies it with the good, there would be a great profusion of goods, since all the monads become some kind of goods (1091 B 22-26). (b) Similarly, if the ideas are numbers, they all are species of good; but in that case (i) if they are ideas of goods only, the ideas will not be substances, but (ii) if the ideas are also ideas of substances, all animals and plants and all things that participate in the ideas will be good (1091 B 26-30). (c) The contrary element, whether it is multitude or the unequal, i.e. the great and small, is evil itself (1091 B 30-1092 A 3). (d) Since matter is that which is potentially each thing, the bad will be potentially the good itself (1092 A 3-5). Of these difficulties, the only ones Aristotle specifically says Speusippus tried to avoid are (a) and (c), though not everything that Aristotle says in connection with them need be ascribed to Speusippus, as we shall see. But (b) and (d) are typical Aristotelian notions which there is no reason at all to ascribe to Speusippus.

1-4 Συμβαίνει . . . ἀγαθῶν. πολλή in πολλή δυσχέρεια probably refers to size and degree, not to number, for Aristotle means that this is the most serious difficulty from which ταῦτα . . . ἄτοπα follow (cf., in its context, 1091 A 37 ἀληθινὴν δυσχέρειαν = F 44). If this is so, the relative clause ἦν . . . μαθηματικοῦ is not parenthetical, as Ross' punctuation implies that it is. It implicitly explains how Speusippus avoided the absurd consequences of identifying the One with the good: he made the One the principle and element of

mathematical number but of nothing else, and so did not need to identify the One with the good. (That this is Speusippus' doctrine is shown by F 42a and F 44.) This passage, then, explicitly contradicts Aristotle's contention elsewhere that for Speusippus the One and multitude are the contrary principles and elements of *all* things (cf. pp. 32-41 *supra*).

The supporting argument (cf. also p. 105, note 466 *supra*), that if the One is the good, all the monads become species of good and that in this way there is a great abundance of goods, is probably Aristotle's own, and there is no reason to ascribe it to Speusippus. (In 1091 B 26-27 Aristotle raises this very objection against the idea-numbers.) He is explicitly said to have rejected the identification of the One with the good in order to avoid identifying the second principle with evil, for this would amount to the presence of evil in numbers (cf. 1091 B 35-37). Aristotle, for his part, since he thought that the unmoved mover is the first principle, that he is good because of his very nature (cf. 1072 A 19-B 30), and that there is no evil among the ἀρχαί (1051 A 15-21), can with plausibility urge all these objections against the Platonists.

That the plural οἱ in line 2 is purely allusive is shown by the use of the singular in line 6 to refer to the same doctrine (cf. also on F 44, lines 4-6 *supra*).

5-8 καὶ τὸ ἐναντίον . . . φύσιν. Since τὸ ἓν and πλῆθος are Speusippus' principles (cf. on F 38, line 1), it is clear that he is the thinker who refused to attach the good to the One because that would necessitate the identification of πλῆθος with evil, since generation is from contraries. Also here Aristotle's argument implies that Speusippus denied the predicate goodness to the One; otherwise, he should have admitted the predicate evil of his second principle, and Aristotle would not have excluded his doctrine from the absurd consequences that, he believes, confront the other Platonists (cf. also on F 42a, F 43 with note 143 there, and F 44, lines 6-10). (The designation of the second principle as τὸ ἀνίσον καὶ μέγα καὶ μικρόν shows that Speusippus is here being contrasted with Plato and Xenocrates, cf. Ross' note on 1091 B 35 and Cherniss, I, pp. 87-88, n. 176, and pp. 480-481.) It is noteworthy that even where as here Aristotle is allegedly reporting Speusippus' argument, he does so by means of his own terminology and of his interpretation of Speusippus' doctrine, for Speusippus neither generated the numbers

nor considered his principles to be elements in Aristotle's sense (cf. pp. 32-41 and 43-44 *supra*).

F 45b-c

Pseudo-Alexander correctly identifies Speusippus as the thinker who refused to identify the One with the good. Since he fails to identify Speusippus in connection with 1091 B 22-25, and with F 43 and F 44 as well, we may infer that in the case of 1091 B 31-35 he did not overlook Aristotle's explicit reference to Speusippus in F 42a and/or his own comment on that passage. Syrianus in all probability depends on the commentary of the pseudo-Alexander.

F 46a

Context. On the purpose of *Metaphysics* A. 10 cf. the introductory note to F 30 *supra*. The immediate context of F 46a (cf. 1075 A 25 ff.) is a series of objections against Aristotle's predecessors for (a) generating all things from contraries which (b) most of them identify with good and evil. To (b) Speusippus is the exception among the Platonists. Aristotle here refutes (a) with a reference to his doctrine of matter as the necessary substratum of contraries and (b) with the absurd consequences of making evil itself a principle (cf. also the introductory note to F 45a, and on F 45a, lines 1-4 *supra*).

1-3 Ἡμῖν . . . ἐναντίον. Aristotle here interprets the doctrines of the Platonists, Speusippus' included, as generating all things from contraries (cf. also the introductory note to F 38 with note 129, and on F 45a, lines 5-8 *supra*), one of which according to Aristotle they identify with matter. The objection to this is that nothing is contrary to the single matter that underlies any pair of contraries, since contraries require a substratum, as they cannot affect one another (cf. 1075 A 30-31: ἀπαθὴ γὰρ τὰ ἐναντία ὑπ' ἀλλήλων). The implication is that the principles cannot be contraries.

2 οἱ τὸ ἀνίσον τῷ ἴσῳ. This refers to Plato (cf. on F 38, lines 1-2 *supra*) and in particular to Xenocrates (cf. on F 45a, lines 5-8), though Platonists in general—excluding Speusippus (cf. the following note)—may have been included here as well. Cf. Ross' note on 1075 A 32 and Cherniss, I, pp. 479-487.

τῷ ἐνὶ τὰ πολλὰ. In all probability this refers to Speusippus (cf. Ross' note on 1075 A 33). Aristotle usually ascribes to him the contrary principles τὸ ἔν and τὸ πλεῖστος (cf. on F 38, line 1). But *Metaphysics* 1056 B 3-1057 A 17, where the contraries ἔν—πολλά are discussed immediately after ἔν—μέγα καὶ μικρόν (= ἄνισον), and the fact that in 1091 B 30-32 (= F 45a), 1092 A 29 (cf. on F 38 with note 127 there), and 1092 A 35-B 2 (= F 38) πλεῖστος is mentioned as an alternative principle to ἄνισον and to μέγα καὶ μικρόν, show that ἔν and πολλά here refer to Speusippus. Aristotle's substituting πολλά for πλεῖστος is probably to be explained by his contention that πλεῖστος is not the contrary of ἔν, nor of ὀλίγον either. Cf. 1057 A 12-17 and Cherniss, I, n. 60, second paragraph.

4-5 ἔτι . . . στοιχείων. This refers to Platonists other than Speusippus, especially to Plato and Xenocrates, cf. F 45a, lines 5-8 with note *ad loc.*

5-6 οἱ . . . ἀρχή. *Pace* Ross (in his note on 1075 A 37 and also in his translation) and others, this passage in all probability refers to Speusippus alone, not to Speusippus and the Pythagoreans. For Aristotle is here concerned with a *Platonistic* doctrine that did not identify the two contrary principles with good and evil, respectively, in order to avoid the absurd consequences which follow from making evil itself a principle. This is Speusippus' doctrine, as is shown by 1091 B 31-35 (= F 45a), a passage which can refer only to him (cf. on F 45a, lines 5-8 and on F 38, line 1). Moreover, Aristotle here refutes this doctrine with the contention that in all things the good is in the highest degree a principle, and this is the same argument he uses against Speusippus in 1091 B 16-19 (cf. on F 44, lines 6-10). Robin, *Idées et Nombres*, p. 558, n. 2, since he proposes to read καλόν for κακόν in 1075 A 37 (= line 5), has failed to see that Aristotle is not here concerned with the aspect of Speusippus' theory referred to in 1072 B 30-1073 A 3 (= F 42a) but with that of 1091 A 29-B 3 (= F 44) and 1091 B 31-35 (= F 45a). On his criticism of Speusippus here cf. pp. 43-44 *supra*.

6-8 οἱ δὲ . . . εἶδος. Those Platonists who like Plato and Xenocrates make the good a principle are right (sc. against Speusippus), but they fail to explain in what way the good is a principle, whether it is as final, efficient, or formal cause.

F 46b

Pseudo-Alexander identifies the doctrine which is opposed to the identification of the One with the good as that of Speusippus and the Pythagoreans. But as he does so merely by referring to 1072 B 30-32 (= F 42a), and since he speaks as if F 46a were mainly concerned with the Pythagoreans (cf. *contra* on F 46a, 5-6), we may infer that his testimony has no evidential value at all.

F 47a

Context. In order to understand the implications of F 47a, it is essential to determine what is the main point Aristotle is trying to prove in the preceding passage, namely, in 1096 A 17-B 5. He begins ch. 4 of the first book of the *Nicomachean Ethics* with the statement that in order to determine what is meant by the universal good it is necessary to argue against the ideas (1096 A 11-17). Thereafter he raises four objections against the separate existence of the idea of good: (a) The Platonists do not postulate a single idea in the case of a group of things which stand to one another in the relation of τὸ πρότερον καὶ ὕστερον, and for this reason they do not posit a single idea of all the numbers (cf. Cherniss, I, pp. 513-524 with his references to J. Cook Wilson's paper in *CR* 18 [1904], pp. 247-260). According to this canon there could not be a single idea of all goods, since the good is predicated in all the categories and the categories stand to one another in the relation of τὸ πρότερον καὶ ὕστερον, as substance is naturally prior to the relative (1096 A 17-23, where n.b. 22-23: ὥστ' οὐκ ἂν εἴη κοινὴ τις ἐπὶ τοῦτοις ἰδέαι). (b) The good has as many senses as being, since it is predicated in all the categories; and so it is clear that it could not be a single and common universal. For, if it were, it would not be predicated in all the categories but only in one (1096 A 23-29; n.b. 27-28: δῆλον ὡς οὐκ ἂν εἴη κοινόν τι καθόλου καὶ ἓν). (c) According to the argument from the sciences (cf. Cherniss, I, pp. 235-260), one science corresponds to a single idea; and so, if there were a single good (sc. the idea of good), there would also be a single science of all goods. In fact, however, there are many sciences even of things which fall under the same categories. The implication is that there is no single science of all goods and, hence, no single idea of good either (1096 A 29-34). (d) The idea is just the single and common formula of the essential nature, but that formula is common to the idea and to the particulars which participate in it. And so *qua* good there is no

difference between the idea of good and a particular good, just as there is no difference between the idea of man and a particular man. And even if the idea were eternal, it would not be good to a higher degree than a particular good. The implication here is that there is no reason to separate the common formula of the essence and make it a separately existing individual (1096 A 34-B 5; cf. Cherniss, I, pp. 202-203). Whether these objections are cogent or not, it ought to be clear that the point Aristotle is trying to prove is that there is no single idea of good, that *the* good is not a single unit (cf. the following note, with J. A. Stewart, *Notes on the Nicom. Ethics*, I [Oxford, 1892], p. 84, Cherniss, I, n. 301).

1-3 Πιθανώτερον . . . δοκεῖ. "But the Pythagoreans placing the One in the column of the goods seem to speak about it with more plausibility (sc. than those who posit a single idea of good); them indeed also Speusippus seems to have followed." Some scholars (e.g. Merlan, *From Platonism*², pp. 110-111 and Krämer, *Ursprung*, p. 212, n. 55) have taken this statement to mean that Speusippus himself placed the One in the column of goods. If this were so, however, it would follow that according to Speusippus the predicate goodness belongs to the One, though the One is not identical with the good.¹⁵² And so indeed was this fragment interpreted by Zeller, II, i, p. 713, n. 1 and pp. 999-1000 with n. 3 on p. 999. But this interpretation is impossible not only because it fails to do justice to the point Aristotle is trying to make in F 47a, but especially because Aristotle's reports about, and arguments against, Speusippus elsewhere imply both that the latter rejected the identification of the One with the good and that he denied that goodness can be predicated of the One (cf. on F 42a, F 44, lines 6-10, and F 45a, lines 5-8).¹⁵³ Nor is it possible to accept the interpretation of Robin,

¹⁵² For this reason I cannot accept Ross' interpretation (*Aristotle's Metaphysics*, II, p. 489): "Aristotle must mean that Speusippus put the One in the series to which all good things belonged, though he did not think of it as itself a good."

¹⁵³ The other argument given by Zeller in support of his thesis (*Platonische Studien* [Tübingen, 1839], p. 277, n. 1 and Zeller, II, i, p. 999, n. 3) is to postulate a lacuna in *Metaphysics* 1091 B 13-15. There, after the words τῶν δὲ τὰς ἀκινήτους οὐσίας εἶναι λεγόντων οἱ μὲν φασιν αὐτὸ τὸ ἐν τὸ ἀγαθὸν εἶναι and before οὐσίαν μέντοι τὸ ἐν αὐτοῦ ὄντο εἶναι μάλιστα, reference would have been made to Speusippus' alleged doctrine of "good" as an essential predicate of the One in opposition to the other Platonists' identification of the One and

Idées et Nombres, n. 455 (pp. 510-513, esp. p. 512), who thinks that Aristotle, having taken the Platonic good to be identical with the One, is contending in F 47a that the Pythagoreans implicitly deny that doctrine by making the One one of the goods. The point of Aristotle's arguments against Plato in *Eth. Nic.* 1096 A 17-B 5, however, is not that the good is not identical with the One, but that the good is not a unit, as every idea is a unit (cf. the previous note). Aristotle means that the Pythagoreans, by placing the One in the column of the goods, seem to have considered it as a good among other goods. He is most probably thinking of the Pythagorean table of opposites which he himself describes in *Metaphysics* 986 A 22-26, where the One (in the third place) and the good (in the ninth place) appear in the same column. Aristotle thinks that there are many goods and that they are *analogically* related to one another, as "good" is not a purely homonymous term (cf. Cherniss, I, pp. 359-364). It seems therefore that for the purpose of his polemic against the Platonic idea of good he is here interpreting the Pythagorean opposites in the column where the good appears as "goods," as if the Pythagoreans themselves had said that there are many goods but no single good that comprehends them all (cf. Cherniss, *Crit. Pres. Philos.*, p. 241, n. 111). Thereby he can see in them an antecedent to his own doctrine. But even if the table of opposites goes back to the early Pythagoreans, they could hardly have meant that "good" is an analogical term, and Aristotle's ἐοίκασιν is perhaps an indication that he is aware of this fact. A similar inference may be drawn from the verb used in the case of Speusippus (δοκεῖ). Aristotle is clearly aware of the fact that Speusippus not only rejected the identification of the One with the good but also denied that the One is a good (cf. *supra* the references given against Zeller). He may therefore mean merely that Speusippus, like the Pythagoreans according to his own interpretation, was aware of the fact that the goods are many and that there is no single good that comprehends them all. Thus the vagueness of Aristotle's statement, "them indeed also Speusippus seems to have followed," is explained. In other

the Good. But, even if Zeller were right about the lacuna, it would not follow that Aristotle there ascribed to Speusippus a doctrine which contradicts his testimony in F 42a, F 44, and F 45a. As it is, however, there is no need at all to postulate a lacuna, and Zeller's conjecture has been sufficiently refuted by Bonitz, *Aristotelis Metaphysica*, p. 586, n. 1, Robin, *Idées et Nombres*, n. 453, §§ II-III (pp. 506-508), and Ross (note on 1091 B 13).

words, there is no need to think that Aristotle is here saying that Speusippus himself placed the One in the column of the goods (which would contradict his testimony about Speusippus in several passages of the *Metaphysics*). The relation Aristotle here sees between Speusippus' doctrine and that of the Pythagoreans is sufficiently explained by the point common to both: there is no single good, the good is not a unit. And there is no question that Speusippus could not have believed that the good is a univocal (in his terminology, synonymous) term, and even less that there is a separate idea of good (cf. pp. 21-23 and 70-72 *supra*). It is even possible that in relating Speusippus to the Pythagoreans Aristotle is here following Speusippus himself, who might have cited the Pythagoreans as a precedent to his own doctrine (cf. Frank, *Plato*, pp. 242-243).

F 47b

Eustratius is merely paraphrasing Aristotle's text, which he misunderstands. The same thing must be said about Aspasius, *In Eth. Nic.*, p. 13, 3-19, who says that according to the Pythagoreans the numbers come from the ideas, and who does not mention Speusippus at all.

F 47c

The anonymous author, though he is merely paraphrasing Aristotle's text, at least correctly understood the point made in F 47a about the Pythagoreans: they did not say that the good is a single thing (cf. on F 47a). On this commentary cf. p. 443 *infra*.

F 48

This fragment occurs in that part of Proclus' commentary on Plato's *Parmenides* extant only in the Latin translation of William of Moerbeke, which was first published by Klibansky and Labowsky in 1953.¹⁵⁴ Because it has influenced later scholars, I transcribe their translation of this text: "This is also how Speusippus interprets the doctrine of the ancients. What does he say? 'For they held that the

¹⁵⁴ The MSS do not ascribe this translation to William of Moerbeke, but Klibansky's arguments in favor of this ascription are persuasive. Cf. Klibansky, *Ein Proklos Fund.*, pp. 30-32 and pp. XV-XVI of his edition. The text of this fragment is corrupt in two places (lines 5, *ponat*, and 7, *induxerunt*), but something like the editors' conjectures is needed.

One is higher than being and is the source of being; and they delivered it even from the status of a principle. For they held that given the One, in itself, conceived as separated and alone, without the other things, with no additional element, nothing else would come into existence. And so they introduced the indefinite duality as the principle of beings.' " ¹⁵⁵

This text was at once cited by Merlan (*Philos. Rev.* 64 [1955], p. 147, *From Platonism*², pp. 132-133; cf. also Dörrie, *Philos. Rund.* 3 [1955], p. 15, n. 3 = *Platonica Minora*, p. 275, n. 3) as corroborating his interpretation that Speusippus' One is above being. Burkert (*Lore and Science*, pp. 13, 21, n. 28, and 63-64),¹⁵⁶ however, noticing that this text speaks of the Indefinite Dyad, whereas Speusippus' second principle is $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$, and that according to Proclus Speusippus himself was interpreting the thought of "the ancients," contends that Speusippus is here giving a Platonizing interpretation of Pythagoreanism and ascribing to the Pythagoreans Plato's principles One and Indefinite Dyad, since he cannot have meant to include Plato himself among the ancients. This text, then, would be evidence of Plato's alleged doctrine of "the One above being," a notion that according to Burkert Aristotle ascribes to Speusippus himself in *Metaphysics* 1092 A 14-15 (= F 43). This interpretation has been accepted, among others, by Krämer (*Ursprung*, pp. 54, 209, n. 46, 356, 359; *AGPh* 51 [1969], pp. 4-5), Gaiser (*Platons ungeschriebene Lehre*, pp. 475, 530-531), and Happ (*Hyle*, pp. 142-143). Krämer even considers this text to be an indirect testimony that Speusippus' One is above being.

Klibansky and Labowsky themselves, however, saw that a more cautious approach to this text is necessary. For in their note on it (p. 86), referring to a hitherto unpublished work of their own ("*Speusippus On Pythagorean Philosophy*, A New Fragment preserved by William of Moerbeke"), they maintain that this fragment belongs to Speusippus' "On Pythagorean Numbers" (cf. F 28), that Proclus did not have direct access to Speusippus but took this text from Nicomachus of Gerasa, who very likely gave a Neopythagorean version of Speusippus' statement. Our first task must be to determine as exactly as possible what this text says, for

¹⁵⁵ On p. 86 the editors give also a Greek version where, however, they have failed to render "*entium principium*" (cf. Kluxen, *Philos. Rund.* 4 [1956], p. 218, n. 4).

¹⁵⁶ In the German version (1962) = pp. 12, 19, n. 33, and 56-57.

it seems that the editors and the other critics mentioned above have misinterpreted it and that they have failed to see that, as a testimony about the Pythagoreans, or Plato, or Speusippus, or all three, it is highly suspect.

Proclus believes that this text is in agreement with the doctrine he himself reads into Plato, *Parmenides* 141 E 10-142 A 1. The main points of Proclus' discussion of this Platonic passage are: The first One is not like the one which coexists with being (p. 36, 1-2). The first One is not participated by being. That is the function of the second one, the one that is, and so the first One transcends the "one being" (= ἐν ὄν) (p. 36, 26-31). The first One is prior to, and is the cause of, the existent. The first One is the cause not just of being but of everything, though of the existent before the rest. But since the existent must participate in a one, there is a one, second to the first One (*In Parmenidem*, pp. 36, 32-38, 32). After citing the text of Speusippus Proclus concludes, "So he (sc. Speusippus), too, testifies that this was the opinion of the ancients about the One: it is withdrawn beyond existence, and next after it comes the indefinite duality. Here too, then, Plato proves this One to be beyond the existent and beyond the unity that is in the existent and beyond the whole One Being" (p. 40, 6-9, as translated by Klibansky and Labowsky).¹⁵⁷ In short, what Proclus reads into the alleged fragment of Speusippus is that there is a first One beyond or above being which is the cause of being but not at all a principle, that there is next the (or an) Indefinite Dyad, and that the first One is not a principle coordinated with it. This interpretation is essentially different from that of Burkert, Krämer, and others who think that according to F 48 the One and the Indefinite Dyad are the principles or elements from which all other entities are derived. But Proclus' interpretation is essentially correct, though there seems to be

¹⁵⁷ In p. 86 the editors refer to a passage of Proclus' commentary on the *Timaeus* as embodying the same doctrine as that of F 48. Since there is an essential difference between the two passages which is discussed in the text *infra*, I transcribe the pertinent words. Cf. *In Timaeum*, I, pp. 176, 6-177, 2 (Diehl), where n.b. καὶ μὴ <διὰ> τοῦτον οἰηθῶμεν τὸν λόγον, ὅτι δὴ τὰς ἀρχὰς τῶν πραγμάτων διηρημένας θετέον· καὶ γὰρ τὰς δύο ταύτας συστοιχίας ὁμογνίους φαμέν· προηγῆται γὰρ τὸ ἐν ἀπάσης ἐναντιώσεως, ὡς καὶ οἱ Πυθαγόρειοι φασιν. ἀλλ' ἐπεὶ καὶ μετὰ τὴν μίαν αἰτίαν ἡ δυὰς τῶν ἀρχῶν ἀνεφάνη, καὶ ἐν ταύταις ἡ μονὰς κρείττων τῆς δυάδος . . . ἐπεὶ δὲ τὸ ἐν ἐπέκεινα τῆς πρωτίστης δυάδος, κτλ. *Pace* Klibansky-Labowsky, followed by Krämer and others, Plato, *Sophist* 252 C 2 ff. has no relation whatsoever with F 48, and Being is there an idea which combines with all the other ideas, cf. esp. 252 C ff., 254 B-257 A.

something wrong with the text of the fragment itself, as we shall see. For it is explicitly stated in F 48 (a) that the One is above being,¹⁵⁸ (b) that the One is not at all a principle, (c) that it is (like the first One of Plato's *Parmenides*, according to Proclus) the cause of being,¹⁵⁹ and (d) that there is a second element, the (or an) Indefinite Dyad, which is the principle of beings. Since the One is beyond being, and since it is *not* a principle, it certainly cannot be the coordinate, even though superior, element that together with the Indefinite Dyad would produce all the other entities.¹⁶⁰ The doctrine embodied in this fragment is therefore incompatible with Speusippus' and Plato's thought and with what Aristotle reports about them. Aristotle does *not* say that Speusippus' One is above being or that it is non-being (cf. on F 43), nor does he say that of Plato's One either.¹⁶¹ Moreover, he does say that Speusippus' One

¹⁵⁸ The whole context indicates that this is the meaning of "*Le unum melius ente*" and that there is probably no connection with the good as such (cf. also Isnardi Parente², p. 1038 with notes 46 and 47). Moreover, if the words in question literally meant that the One is "better" than being, they would contradict Aristotle's testimony about Speusippus and the Pythagoreans. Cf. F 42a-F 47a with comm. *ad locc.* On Plato cf. note 161 *infra*.

¹⁵⁹ Cf. "*et a quo* (i.e. from the One) *le ens*." This means that being comes from the One as a "procession," for the One is said to be above being and not to be a principle. "*a quo*" = ἀφ' οὗ or ἐξ οὗ and designates order in a series.

¹⁶⁰ It cannot be the case, as Burkert, *Philologus* 103 (1959), p. 168, n. 3 thinks it is, that "*alterum elementum ipsi apponens*" means a second element coordinate with the first One, from which elements all things are derived. This is incompatible with the notion that the One is above being and not at all a principle. Moreover, it is the Indefinite Dyad that is called the principle of beings (*entium principium*). On "*alterum elementum*," cf. the text *infra*.

¹⁶¹ Krämer and others think that Plato's One is above being, for they combine Plato, *Republic* 509 B, where the Good is said to be ἐπέκεινα τῆς οὐσίας πρεσβεία καὶ δυνάμει, with the second part of the *Parmenides*, with the *Philebus*, and with statements where Aristotle ascribes to Plato the identification of the One with the Good. But the Good of *Republic* 509 B is the idea of good (cf. 505 A-B, 506 D-E, 507 A-B, 508 B-C, 508 E-509 A, 517 B-C, 526 D-E, 540 A, etc., which show that "the good" and "the idea of good" are equivalent expressions) and cannot be identical with the One. As an idea it "communicates" with being and other general ideas (cf. *Republic* 476 A 4-7 with Cherniss, I, n. 128). (For the correct interpretation of *Republic* 509 B cf. Cornford, *Plato and Parmenides*, pp. 131-132.) Moreover, Plato's doctrine is incompatible with the notion that the One is the supreme principle of all things and also with the identification of the One with the Good that Aristotle ascribes to him (cf. Cherniss, *Riddle*, pp. 56-59). Furthermore, the second part of the *Parmenides* does not contain serious Platonic doctrine (cf. Shorey, *Unity*, pp. 57-60 and Cherniss, *AJP* 53 [1932], pp. 122-138 = *Selected Papers*, pp. 281-297); neither the *Philebus* nor Aristoxenus, *Elem. Harm.* II, 30-31 does support Krämer's interpretation, either. Against him cf. also Gräser, *AGPh* 56 (1974), pp. 71-87.

is a principle and, together with $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$, the principle of mathematical number (cf. on F 38, line 1). And to Plato he ascribes the One and the Unequal—or the great and small—as the principles of all things.¹⁶² Nor can the doctrine of this fragment possibly be that of the early Pythagoreans, and it is impossible that Speusippus could have ascribed it to them. For this text is nothing but an attempt to foist on Speusippus or, through him, on Plato and/or the Pythagoreans the Neoplatonic (or Neo-pythagorean) notions of the One above being and of a lower pair of principles from which all other entities are derived.

In connection with the last mentioned point there is a serious difficulty that has hitherto escaped the attention of the scholars who have discussed this fragment. I refer to the statement that the Indefinite Dyad is the principle of beings (*interminabilem dualitatem entium principium induxerunt*). For from Aristotle onward it is customary to refer to the One and the Indefinite Dyad as the principles and/or elements of all things, or to refer to the formalizing or differentiating element, which is usually the One, as the principle of all entities. It also sometimes happens—as is the case in the text of Proclus' commentary on the *Timaeus* quoted in note 157—that a dyad or a dyad of principles is posited after the first One. This is in fact, as we have seen, what Proclus reads into Plato's *Parmenides*: after the first One comes the $\epsilon\upsilon\ \delta\upsilon$. In F 48, however, it is the Indefinite Dyad itself that is said to be the principle of beings; and yet the Indefinite Dyad, precisely because it is *indefinite*, cannot be a principle without an additional formalizing principle or element. Proclus himself, immediately after his citation of F 48, states that after the One which is above being comes the (or an) Indefinite Dyad, and so it is possible that the text of this fragment available to him was already corrupt. Since, however, we have only a medieval Latin translation of Proclus, and since even the Greek text available to the translator may have been corrupt, it is possible that there is corruption not only in the text of the fragment itself but also in that of Proclus' subsequent comment. This last possibility seems to me to be more likely than the first for the following reasons. In the text of the fragment as it stands the Indefinite Dyad itself is

¹⁶² For the points at issue here it is irrelevant whether or not Aristotle ascribes to Plato the Indefinite Dyad as a second principle, though, *pace* Burkert, Krämer, and others, I believe he does not do so. Cf. on T 45a-c and on F 38, lines 1-2 with references.

called the principle of beings and also in Proclus' subsequent comment the Indefinite Dyad is mentioned. It is highly improbable that the name of the individualizing principle dropped out of the text twice and also that Proclus would have accepted without comment a text where the Indefinite Dyad as such is said to be the principle of entities. It is rather more likely that a later scribe, seeing in his text the word dyad, added "indefinite" to it to obtain the more technical expression "indefinite dyad." Confirmation of this conjecture may be seen in the fact that the fragment states that "*sine aliis*" (plural!) nothing but the One would exist, so that the "*alterum elementum*," which is then said to be the principle of beings, would itself originally have been a duality of principles. However that may be, it ought to be obvious that the One which is above being, and which is said not to be a principle, cannot be the co-ordinate element. Moreover, the fact that the Indefinite Dyad as such is called the principle of entities shows there is something wrong with the extant text of this fragment. But even if we substitute dyad for Indefinite Dyad, as in the passage from Proclus cited in note 157, this text cannot be accepted as a testimony of the doctrine of Speusippus, or Plato, or the early Pythagoreans, because the conception of the One we find in it is incompatible with these thinkers' doctrines and with Aristotle's testimony about them.

It is clear that Proclus had in front of him a text ascribed to Speusippus, since he introduces the fragment with the words "*quid dicit?*" But it is not necessary to think that Proclus meant "Speusippus" himself was in this text interpreting the doctrine of the ancients. For the words which precede the quotation, "*et ut* ¹⁶³ *Speusippus — narrans tamque placentia antiquis — audit*," probably mean simply "This is also how Speusippus understands (sc. this matter), speaking as is pleasing to the ancients." The word "ancients" is probably Proclus' own.¹⁶⁴ He has already cited Plato for the notion that the One is above being, etc. and, finding a text where the same doctrine is ascribed to Speusippus, he concludes that this was indeed the doctrine of the ancients. Thus, he can say after

¹⁶³ There is no need to change the MSS' reading "*et ut*" to "*ut et*" as the editors have done.

¹⁶⁴ For Proclus οἱ παλαιοί or οἱ ἀρχαῖοι are not only Homer, Hesiod, Orpheus, etc. but also Plato, Aristotle, Speusippus and others. Cf. e.g. *In Timaeum*, I, p. 10, 5-7 [Aristotle], II, p. 120, 7-22 [Theophrastus], *In Euclidem*, p. 77, 15-17 [Speusippus and Amphinomus], p. 78, 8-9 [Menaechmus and his followers].

the fragment, "*quare testatur et iste hanc esse antiquorum opinionem de uno*, etc." We have seen that the contents of this text cannot go back to Speusippus himself, and from the way it is cited by Proclus it appears that he is taking it from some author, more probably a Neoplatonist rather than Nicomachus. The plurals "*putantes*," "*existimantes*," etc. may be due to Proclus' source. It is quite common for late ancient writers to paraphrase in their own terminology the doctrine of an earlier philosopher, to draw inferences from it, and at the same time to ascribe the contents of the doctrine so interpreted to the philosopher whose alleged thought is being reported. The original "Speusippean" nucleus of F 48 may have been a misinterpretation of a text like *Metaphysics* 1092 A 14-15 (= F 43) in the sense that Speusippus' One is above being, and there is evidence of such an interpretation of Speusippus in Iamblichus (cf. pp. 104-105 *supra*). But even if we cannot trace back all the sources of confusion, it is illegitimate to use this text to reconstruct the doctrine of Speusippus and/or that of Plato and the early Pythagoreans.

F 49a

(This fragment occurs in Damascius' *De Principiis* which, *pace* Ruelle, is not the same work as the *In Parmenidem*, cf. Westerink, *Damascius on the Phaedo*, pp. 9-10.)

In the course of arguing for the priority and preeminence of the first One, which is simpler than the monad and is not one of the many, Damascius explains that the One is absolutely ἀμερές, for it must be prior to any "parts." And so he states that Speusippus was wrong in conceiving the One as ἐλάχιστον. Speusippus' One, however, is not equivalent to the Neoplatonic One but is merely the number one or monad and, as such, it is the principle of number and the smallest number (cf. pp. 32-38 *supra*); hence Damascius' criticism is hardly appropriate. It would be tempting to think that Damascius had direct evidence for his statement that Speusippus conceived the One as ἐλάχιστον, but it is highly improbable that he had access to Speusippus. Moreover, it seems that he was thinking of Speusippus' One in connection not so much with quantity as with size (cf. also F 49b); in fact, it was common to confuse ἀμερές with ἐλάχιστον in reference to magnitudes and to physical and other kinds of "elements" (cf. Cherniss, *Plutarch's Moralia* XIII, i, p. 213, n. e). Concerning the probable source of Damascius' interpretation,

one must say that it is unlikely that Zeller, II, i, p. 1001, n. 2 *sub finem* is right in conjecturing that Damascius misinterpreted Aristotle, *Metaphysics* 1087 B 30-33 (= F 39), having drawn the wrong inference from Aristotle's criticism of Speusippus' doctrine. For Aristotle there merely contends that, if the One were the contrary of multiplicity, it would be "few" (ὀλίγον; cf. also *Metaphysics* 1056 B 4-6). It is more likely that Damascius or his source, being aware of the importance of the One in Speusippus' system (cf. *Metaphysics* 1028 B 21-24 = F 29a, 1083 A 23-25 = F 34), extrapolated his interpretation from a passage such as *Metaphysics* 1084 B 23-28, where Aristotle contends that the Platonists treated their One, i.e. their first principle, as a point and that, therefore, they, like the Atomists, ἐκ τοῦ ἐλαχίστου τὰ ὄντα συνετίθεσαν.

F 49b

This fragment occurs in what seems to be a Neoplatonic commentary on Plato's *Parmenides*, which was extant in a palimpsest (*Codex Taurinensis* F VI 1). The MS was later used for a Latin translation of the four Gospels, the so-called Evangelarium of Bobbio. It was destroyed in the fire of 1904. A part of the commentary on the *Parmenides* was published by Peyron in *Riv. Filol.* 1 (1883), pp. 53-71. Some years later Kroll published the complete extant text with an introduction and notes in *Rh. Mus.* 47 (1892), pp. 599-627. He used the collation and notes of W. Studemund and consulted with several scholars, among them Kern, Schanz, Zeller, Usener, and Baeumker. On the basis of Peyron's and Kroll's editions Hadot, *Porphyre et Victorinus*, II, pp. 61-113 has published a new edition with translation and notes. He ascribes this commentary to Porphyry (cf. already *REG* 74 [1961], pp. 410-438). To my mind, however, the commentary contains doctrines which are not Porphyrean and can hardly be that early. (On the basis of the photograph of fol. 93v of the palimpsest, reproduced by Hadot between pp. 104 and 105 of his second volume, it seems that the date Kroll assigned to the handwriting, fifth cent. A.D., is too early.) I have reproduced Kroll's text which, for the lines which make up F 49b, is essentially identical to Hadot's, but I have eliminated some of Kroll's conjectures, since they are too uncertain (cf. e.g. his Τιμώλιον in line 5).

As Kroll himself noted (cf. *op. cit.*, p. 619) Speusippus is here cited and criticized for the same notion for which he is cited and

criticized by Damascius in F 49a. This text is therefore useless for the reconstruction of Speusippus' doctrine (cf. on F 49a *supra*), but it shows that the interpretation of Speusippus' One as "smallest" and "indivisible" had some currency among the Neoplatonists (contrast Proclus' interpretation in F 48). In 49b, too, Speusippus' One seems to be viewed as a magnitude.

F 50

Context. Cf. the introductory note to F 36.

1-8. Ross, on 1090 B 5, Tricot, *La Métaphysique*², II, p. 818, n. 1, Raven, *Pyth. and Eleatics*, p. 109, and many others think that this passage is directed against the Pythagoreans; Robin, *Idées et Nombres*, n. 231 (pp. 227-228) against the Pythagoreans and the Platonists; Reale, *Metafisica*, II, p. 435, n. 13 against Platonizing Pythagoreans or against Pythagoreans and Platonists; Annas, *Aristotle's Metaphysics M and N*, p. 209 against the Academy; Saffrey, *Le Περὶ φιλοσοφίας*, pp. 27-28 goes even further, contending that it is "un compte-rendu global platonicien" and that the φύσεις of line 3 are ideas. Now Aristotle is arguing against those who posit the separate existence of *point*, line, and plane (cf. lines 7-8, διὰ τὸ οὐ χωριστὰ ἔσται;), and these cannot be the Pythagoreans, for they did *not* "separate" magnitudes (cf. 1028 B 15-19, with comm. on F 29a and note 82, and on F 38, line 1 with note 131). Nor can the passage refer to Plato and/or to Xenocrates, for neither believed in the substantiality of the point (cf. on F 38 with note 133 there). Since this last doctrine Aristotle does ascribe to Speusippus (cf. F 51 and F 52 with comm.), and since the passages that precede and follow F 50 (cf. F 36 and F 37) are concerned with his doctrine, we must infer that in all probability 1090 B 5-13 was also meant to refer to him (cf. Zeller, II, i, p. 1005, n. 1; Jaeger, *Scripta Minora*, I, p. 278; Cherniss, I, n. 83 [pp. 133-134], *Gnomon* 31 [1959], pp. 45-46 = *Selected Papers*, pp. 432-433).

What has probably caused confusion is that the argument Aristotle here ascribes to Speusippus—since there are extremes and limits, the point of the line, the line of the plane, and the plane of the solid, such things must be (separate) entities—has a Pythagorean flavor and may originally have been used by the Pythagoreans themselves. For Aristotle does elsewhere say that the Pythagoreans thought that the limits of body are οὐσίαι (cf. on F 29a with note 82 and on F 38, line 1; Cherniss, *Crit. Pres. Philos.*, pp. 40-42); and,

since he here says in criticism that the argument of those who believe in the separate existence of magnitudes applies to sensibles,¹⁶⁵ it is possible that Speusippus himself had made use of a Pythagorean argument. The first objection Aristotle raises against this doctrine—that the extremes are not substances but limits—would be cogent either against the Pythagorean view or against Speusippus' or against both. But his second objection—that even if the limits are substances, they would be substances of sensible things—cannot have been directed at the Pythagoreans, for according to Aristotle they did indeed believe that the limits of body are *sensible* substances (cf. the references given above).

Aristotle's first objection is that the extremes are not substances¹⁶⁶ but limits. This is based on his own doctrine that the *πέρατα* exist potentially in the sensibles. Within this objection, however, he attempts a *reductio* of Speusippus' argument: if the limits are substances, also the limits of walking and of movement in general would be substances, which is absurd. But, in the first place, Speusippus must have used the argument—from "extreme and limit" to substance¹⁶⁷—of his separately existing magnitudes (cf. *infra*). There is evidence that conceptually he "derived" the line from the point, the plane from the line, and the solid from the plane (cf. on F 28, lines 60-62, on F 52, and on F 72-74). He may have argued that the plane [two dimensions] must really be a different kind of entity from the solid [three dimensions]; the line [one dimension] from the plane; and the point [monad with position and no dimension] from the line. And he probably concluded that each kind of magnitude must be a separately existing entity. It is therefore illegitimate to refute him with the analogy of the physical limits of motion. Secondly, there is no evidence that Speusippus extended his reasoning from non-sensible magnitudes to sensible things, or that he thought that *all* extremes and limits are substances. In fact, even if one admitted the substantiality of the

¹⁶⁵ Cf. 1090 B 12-13 (= lines 6-8), where *ὁ λόγος εἴρηκεν* refers to 1090 B 5-7 (= lines 1-3), not to 1090 A 28-30, as Robin, *op. cit.*, p. 228, n. 3 believes, nor to 1090 A 35-B 1, as Saffrey, *op. cit.*, p. 28 would have it (cf. Cherniss, *Gnomon* 31 [1959], p. 46 = *Selected Papers*, p. 433, with his reference to [Alexander], *In Metaph.*, p. 815, 14-16).

¹⁶⁶ The *οὔτε* in line 4 is answered by *οὐ μὴν ἀλλὰ εἰ καὶ εἰσὶ* in line 6, and so Jaeger's insertion of *οὔτε χωριστά* is unnecessary.

¹⁶⁷ On *φύσεις* = substances or entities cf. Cherniss, *Gnomon* 31 (1959), p. 45, n. 2 = *Selected Papers*, p. 432.

physical limits of body, Aristotle's attempt at *reductio* by means of the limits of movement is fallacious, since his use of *πέρατα* is ambiguous.

Aristotle's second argument in refutation is that, even if point, line, and plane are substances, they will be substances of sensible things, as it is to them that the argument of lines 1-3 has referred (cf. note 165); and so there is no reason to think that they are separately existing substances. But Speusippus, even if he adapted to his own use an originally Pythagorean argument, must have referred to his separately existing magnitudes, the existence of which he also supported with the argument that the propositions and theorems of geometry are not true of the sensibles (cf. on F 36 and on F 72-74). And so, if Aristotle means to say that Speusippus himself gave the argument as referring to sensibles, he is misrepresenting his adversary's reasoning. It is more likely, however, that Aristotle is here referring to the original Pythagorean argument (since the Pythagoreans believed that point, lines, and planes actually exist in the sensibles) and/or to his own doctrine that geometrical magnitudes exist potentially in the sensibles and are actualized only in thought, so that their properties are true also of the sensibles (cf. F 36 with comm.). (On points as "extremes" without magnitude cf. note 202.) On Aristotle's criticism here cf. pp. 30-31 *supra*.

F 51

Context. Cf. the introductory note to F 40 *supra*.

1-14. In line 1 by οἱ μὲν . . . ἐκ τοιαύτης ὕλης is meant the Platonistic doctrine of 1085 A 9-23, which posited a plurality of material principles for magnitudes, one for lines, another for planes, and another for solids (cf. the introductory note to F 40). With this is contrasted Speusippus' doctrine (ἑτεροὶ δὲ κτλ.). It was he who posited the One and *πλῆθος* as the principles of number (cf. on F 38, line 1), and so it must be Speusippus to whom Aristotle here ascribes the point as the analogue of the unit and a material similar to *πλῆθος* but not identical with it as the principles of magnitudes. On the point as the analogue of the unit cf. also F 28, lines 33-36 with comm. *ad loc.* and F 65 with comm. *ad loc.*

In lines 4-8 Aristotle criticizes Speusippus' material principle of magnitudes in the same way as in 1085 A 9-23 he had criticized the

Platonistic doctrine that posited several material principles for magnitudes. He contends that (a) if Speusippus' material principle (sc. of magnitudes) is one, then line, plane, and solid will be the same, since from the same elements will come one and the same thing; and that (b) if there are several material principles, then either (i) they are implied in one another or (ii) they are not. If the latter is the case, the plane will not contain a line; if the former, the plane will be identical with the line (cf. also p. 46 f. *supra*). Since according to Aristotle's own testimony here Speusippus posited a single material principle for all magnitudes, we need concern ourselves only with objection (a). And it is clear that his criticism rests on two related assumptions: first, that Speusippus posited a single *formal* principle for all magnitudes, namely, the point (cf. *contra* F 28, lines 38-39 and 60-62 with pp. 44-45 *supra*); second, that as a consequence of this he thought of points as component parts of magnitudes (cf. *contra* pp. 29-30 *supra*).

This last assumption, that Speusippus' magnitudes are ultimately constituted by points, is taken as a fact in lines 8-14, where Aristotle contends that his adversary cannot derive the points from the principles of magnitude he has posited and that this difficulty is similar to that of deriving the monads from the One and $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$ (cf. 1085 B 12-22 with comm. on F 40). For obviously the points other than the point itself cannot come from the point itself (cf. also p. 99, note 443 *supra* on 1085 B 29 = line 10) and some kind of extension. The implication here is that an indefinite extension would be divisible, and so would introduce divisibility into each of the derived points. But points must be indivisible by definition. Moreover, though in the case of monads it is possible to talk of a $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$ $\mu\omicron\nu\acute{\alpha}\delta\omega\nu$, since number is made up of discrete units, magnitudes are not made up of indivisible points; and so an extension of indivisible parts is impossible. This argument implies that magnitudes are continuous and that a continuum cannot consist of actually indivisible parts (cf. e.g. *Physics* 231 A 21-232 A 22). Ross (in a note to his translation) misunderstands this last objection, for he takes it to imply that a point cannot have as an element part of a distance (or extension), since any part of a distance must be a distance. (Similarly Tricot, *La Métaphysique*, II, p. 785, n. 1, who mistakenly ascribes this interpretation to Robin.) The second argument, however, is against indivisible points as constituent parts of magnitudes, and Ross himself comes closer to giving the correct interpretation in his note on 1085 B 27-34.

It need not be inferred from this passage that Speusippus himself called *διάστημα* his material principle of magnitudes, since, given the nature of Aristotle's criticism here, it is possible that *διάστημα* is due to him. Yet, if Speusippus truly posited a "material" principle for magnitudes, he probably meant by it something like "dimension." Cf. also p. 45 *supra*.

F 52

Context. In *De Anima* 408 B 32-409 B 18 Aristotle argues against the most unreasonable doctrine that makes the soul a self-moving number. This was Xenocrates' doctrine (cf. Xenocrates, frags. 60, 61, and 68 [Heinze]). Aristotle maintains that this doctrine, in so far as it makes motion an essential attribute of soul, is refuted by his previous demonstration that motion belongs to soul only accidentally (cf. 408 B 30-31, 408 A 30-34, and esp. 405 B 31-406 B 15). He then announces that there are also specific arguments against the number aspect of the theory (408 B 34-409 A 1). In the first place, since number is a congeries of units and each unit is simple and undifferentiated, no unit can be both mover and moved (409 A 1-3, Cherniss, I, p. 396). Secondly, ἔτι δ' ἐπεὶ φασὶ κινηθεῖσαν γραμμὴν ἐπίπεδον ποιεῖν, στιγμὴν δὲ γραμμὴν, καὶ αἱ τῶν μονάδων κινήσεις γραμμαὶ ἔσονται· ἡ γὰρ στιγμή μόνος ἐστὶ θέσιν ἔχουσα, ὃ δ' ἀριθμὸς τῆς ψυχῆς ἤδη πού ἐστι καὶ θέσιν ἔχει (409 A 3-7 = F 52). Aristotle's objection is as follows. The soul has position in as much as it is in a body, and so the units (which make up the soul's number) would be points, for a point is a unit with position. Since they say that the motion of a line produces a plane and that of a point a line, the motions of the soul's units would be lines, which is absurd. The underlined words, however, refer to a doctrine which cannot have been that of Xenocrates, but which is in fact Speusippus' (cf. the following note). And so Aristotle is refuting Xenocrates "with consequences deduced from a principle to which Speusippus, but not Xenocrates subscribed" (Cherniss, I, n. 322). On Aristotle's tendency to extend to all or to some other Platonists an objection that may be pertinent only against one or more Academic doctrines, cf. Cherniss, I, pp. 46-48, 60, 80-82, and 130-132.

1-4. The word *φασί* shows that Aristotle is referring to a doctrine which was actually held. The following considerations show that the conception of the line as the "fluxion" of a point and of the

plane as the “fluxion” of a line must be ascribed to Speusippus: (a) The theory presupposes that the point is the first principle of magnitude, the line the second, etc., and we have Speusippus’ own words to that effect (F 28, lines 60-62): καὶ ἐν τῇ γενέσει (sc. of the pyramid, you will find ten)· πρώτη μὲν γὰρ ἀρχὴ εἰς μέγεθος στιγμή, δευτέρα γραμμὴ, τρίτη ἐπιφάνεια, τέταρτον στερεόν. (b) It also presupposes the substantiality of the point, a doctrine that Aristotle ascribes to Speusippus only (cf. on F 38, line 1 with note 133; F 50, F 51, and F 65 with the respective comm.), and that we know was his (cf. F 28, lines 34-36, 38-39, 60-62). From F 52 and from F 28, lines 60-62 we may infer that it was also Speusippean doctrine conceptually to generate the solid from the fluxion of a plane. And we also know that Speusippus meant these “constructions” to be taken only in a metaphorical sense, οὐ ποιητικῶς ἀλλὰ γνωστικῶς ὁρῶμεν ὥσαντι γιγνόμενα λαμβάνοντες τὰ ἀεὶ ὄντα (F 72, lines 9-11).

To the best of my knowledge Cherniss (I, n. 322) was the first scholar who saw that F 52 refers to a doctrine of Speusippus. Ross in his note on *De Anima* 409 A 3-5 declares Cherniss’ interpretation to be possible but adds that “our knowledge both of Speusippus and of Xenocrates is too fragmentary to make certainty possible.” There is evidence, however, that the doctrine of *De Anima* 409 A 4-5 is that of Speusippus, whereas Xenocrates, since he believed in “indivisible lines” (cf. note 133), could not have subscribed to the notion that line is the “fluxion” of a point, plane the “fluxion” of a line, etc. (cf. also p. XXIV f. *supra*). Nor can this doctrine have been that of the early Pythagoreans and Archytas (cf. e.g. Frank, *Plato*, p. 370, n. 282; Timpanaro Cardini, *Pitagorici*, II, p. 295) because it presupposes the substantiality and separate existence of point, line, plane, and solid (cf. on F 50 and F 51 *supra*). Isnardi Parente², pp. 1029-1030 with notes 28 and 29, in 1977, is still unacquainted with Cherniss’ discussion of the subject and with his refutation of Frank.

F 53

Context. Since there is no connection in thought between 1092 A 17-21 and the preceding passage, Bonitz, *Metaphysica*, p. 589 conjectures that these lines were wrongly transposed here from book M.8-9. But quite frequently Aristotle inserts in a series of objections against a given theory one or more arguments which are not connected with the rest (cf. e.g. 1085 A 23-31 with the intro-

ductory note to F 40). Since the lines that precede this fragment (1092 A 11-17 = F 43) are concerned with Speusippus, and since in the passage that follows it (1092 A 21-B 8, where 1092 A 35-B 3 = F 38) also his doctrine is the butt of Aristotle's criticism (cf. the introductory note to F 38), it is more probable than not that F 53 was meant to refer to him (cf. Ravaisson, p. 44; Brandis, II, b, i, p. 18, n. 44; Zeller, II, i, p. 1007 and n. 3; Ross, on 1092 A 17-21; Cherniss, I, pp. 485-486; etc.). Cf. also the following note.

1-3. This passage cannot refer to Plato, as the pseudo-Alexander, *In Metaph.*, p. 824, 27-34, whom Syrianus, *In Metaph.*, p. 186, 16-17 tentatively follows, believes it does, nor to Speusippus and other Platonists, including Plato, as Robin, *Idées et Nombres*, n. 253 [p. 266] and p. 475 with n. 410 would have it. For Plato's *χώρα* is eternal (cf. *Timaeus* 52 D), and his definition of *τόπος* is set apart from all others by Aristotle himself (cf. *Physics* 209 B 16-17, Ross' note on 1092 A 17-21, and Cherniss, I, p. 486). Syrianus' distinction of four kinds of space (*In Metaph.*, p. 186, 23-25), *pace* Robin, has nothing to do with Plato, nor with the "later Platonic theory of place" (Ross), since Syrianus himself indicates (*op. cit.*, p. 186, 25-26) that the origin of this notion is Aristotle's own doctrine (cf. Shorey, *De Platonis Idearum Doctrina* [München, 1884], pp. 37-39; Cherniss, I, p. 486).

Aristotle is here criticizing Speusippus for two reasons: (a) He generates place simultaneously with the mathematical solids. Against this Aristotle contends that place is a property of individual things, which are therefore separate in position, whereas the mathematical are nowhere. (b) Speusippus says that the mathematical have to be in place but fails to say what their place is. The first criticism implies that the place of mathematical solids is the same as that of the sensibles,¹⁶⁸ and the second criticism also depends on that assumption (cf. *contra* pp. 31-32 *supra*). Isnardi Parente², pp. 1030-1031 thinks that with *τόπος* here Aristotle is alluding to Speusippus' material principle of magnitudes, an impossible interpretation, since according to Aristotle Speusippus

¹⁶⁸ Also Zeller, II, i, p. 1007 and n. 3 thinks that Speusippus generated space "zugleich mit den mathematischen und der körperlichen Grössen," but he may have thought so merely because he read *καί* before *τοῖς μαθηματικοῖς* in 1092 A 18. Against this reading cf. Bonitz's note *ad loc.* The omission of *καί* is further supported by J.

made *τόπος* simultaneous with the mathematical solids, whereas the material principle of magnitude is, according to him, also the principle of points, lines, and planes (cf. F 51 with comm. *ad loc.*).

F 54a-b

In a fragment of his *Περὶ ψυχῆς* preserved by Stobaeus,¹⁶⁹ Iamblichus distinguishes among his predecessors' doctrines three kinds of mathematical conceptions of the soul, the geometrical, the arithmetical, and the harmonic.¹⁷⁰ As belonging to the first category (cf. F 54a) he mentions the view of Severus,¹⁷¹ that of Speusippus, and a third which is Iamblichus' own.¹⁷² The words *ἐν ἰδέᾳ* should not obscure the fact that Iamblichus intended to ascribe to Speusippus the definition *ἰδέα τοῦ πάντη διαστατοῦ* (cf. Jones, *Platonism of Plutarch*, pp. 73-74). That this is what Iamblichus had in mind is also clear not merely from the parallel passages of Plutarch and of Diogenes Laertius cited *infra* but especially from the *De Comm. Math. Sc.* IX, where this definition occurs without ascription to Speusippus or to anyone else (cf. F 54b).¹⁷³

Zeller, II, i, pp. 784, n. 1 and 1000 with n. 3 takes the definition in Iamblichus to represent Speusippus' own doctrine and thinks that it refers to the world-soul. He says nothing, however, about the fact that this is incompatible with Aristotle's testimony. Merlan (*Philologus* 89 [1934], pp. 197-214, esp. 198-199, 204, 205-206 [= *Kl. Schr.*, pp. 70-87, 71-72, 77, 78-79]; *From Platonism*², pp. 40-48, 53, 55-56; *Biographie*, pp. 201-202 [= *Kl. Schr.*, pp. 130-131]), for his part, contends that Iamblichus is a reliable witness, that we must therefore admit Speusippus considered the soul to

¹⁶⁹ For the fragments of Iamblichus' *Περὶ ψυχῆς* cf. Festugière, *La Révélation*, III, pp. 177-264, where they are translated and annotated. (The discussion of Iamblichus' treatise in Larsen, *Jamblique de Chalcis*, I, pp. 197-213 is unsatisfactory.) My citations of the *Περὶ ψυχῆς* are according to pages and lines of Wachsmuth's edition of Stobaeus, vol. I.

¹⁷⁰ Cf. pp. 363, 26-365, 4.

¹⁷¹ On Severus' view cf. Festugière, *op. cit.*, p. 180, n. 1. His definition of soul comes in all probability from his commentary on the *Timaeus*, cf. Proclus, *In Tim.* I, p. 204, 17; II, p. 152, 27-28 and p. 153, 21-25 with Cherniss, I, p. 510.

¹⁷² Cf. Festugière, *op. cit.*, p. 181, n. 1, to which Iamblichus, *De Comm. Math. Sc.* IX (pp. 40, 7-42, 6) should be added.

¹⁷³ It is obvious that Ravaisson's conjecture *ἀδιαστάτου* for *διαστατοῦ* cannot be right. In F 54a, *ἐν ἰδέᾳ* is instrumental. This point is still misunderstood by Moreau, *Rev. Belge de Philol. et d'Hist.* 34 (1956), p. 1165, n. 1.

be a magnitude, and that Aristotle's testimony about Speusippus is not completely trustworthy. (As an alternative he suggests that Speusippus' philosophy may have developed and that at one time he may have conceived the soul as a magnitude or perhaps even as a Platonic idea.) Merlan believes that Speusippus identified four with the pyramid and probably the pyramid with the soul, and that this identification may well have occurred in the treatise "On Pythagorean Numbers."¹⁷⁴ The essentials of this interpretation have been accepted, among others, by Gaiser, *Platons ungeschriebene Lehre*, pp. 51, 347, n. 41, 546-547, who thinks that Speusippus' doctrine of the soul as interpreted by Merlan goes back to Plato himself;¹⁷⁵ by Krämer, *Ursprung*, pp. 209-210 with n. 48, who therefore believes that Speusippus posited both transcendental immovable geometrical figures and immanent movable ones, to the latter of which the soul belongs;¹⁷⁶ and by Isnardi Parente, pp. 904-906 and Isnardi Parente², pp. 1032-1033 with notes 32 and 33, who tries to support Merlan's interpretation by referring to Speusippus Aristotle, *De Anima* 404 B 18-27 (against this ascription cf. Appendix II *infra*).

What is common to all these interpreters, however, that Speusippus considered the soul to be a geometrical magnitude, is incompatible with Aristotle's testimony that Speusippus posited several *οὐσίαι*, first numbers, second magnitudes, and then the soul, to each of which he ascribed different *ἀρχαί* (cf. *Metaphysics* 1028 B 21-24

¹⁷⁴ Cf. Merlan, *From Platonism*², p. 53. There is of course no evidence that Speusippus' philosophy developed (cf. p. 10, n. 37 *supra*). Nor is it the case that in the extant part of the "On Pythagorean Numbers" four = pyramid, as Merlan says; Speusippus could not have meant to identify any magnitude with any number (cf. Aristotle, *Metaphysics* 1028 B 21-24 = F 29a, 1085 A 31-B 4 and B 27-34 = F 51), and his own words in F 28 show that he did not do so (cf. F 28, lines 33-36 with comm. *ad loc.*). Concerning Merlan's notion that Iamblichus had direct access to Speusippus' "On Pythagorean Numbers," suffice it to say that, if he is the source of F 28, we may infer from the summary he gives of Speusippus' treatise (cf. F 28, lines 5-14) that the soul was not mentioned in it. In fact, however, it is more probable than not that F 28 does not come from Iamblichus at all (cf. on F 28, lines 1-62).

¹⁷⁵ Gaiser relies on Diogenes Laertius III, 67, which depends on a late Stoic source (cf. the text *infra*), and which is incompatible with Plato's doctrine of the soul.

¹⁷⁶ Isnardi Parente, p. 906 rightly rejects this part of Krämer's interpretation. Yet she does not realize that, if Merlan's interpretation of F 54a, which she accepts, is correct, then the soul must be a magnitude that moves. This implication Merlan is at least prepared to accept.

= F 29a; 1075 B 37-1076 A 4 = F 30; 1090 B 13-21 = F 37). Therefore it is impossible that he could have conceived the soul as a magnitude.¹⁷⁷ Moreover, Aristotle reports that Speusippus posited the separate existence of numbers and magnitudes as the unchangeable objects of knowledge, and that he thought it is the soul that possesses that knowledge (cf. *Metaphysics* 1090 A 11-15, 25-28, A 35-B 1 = F 36 with comm. *ad loc.* and note 119 there). Yet if the soul were a magnitude, at least one kind of magnitude would move, since the soul has motion either accidentally (because it is in a body) or as part of its essence.

Merlan's contention that Iamblichus is a reliable witness, whereas Aristotle distorts Speusippus' thought in order to press against him the charge of making of the whole of nature a series of disconnected episodes, is nothing but special pleading. For it is clear both from his extant writings and from his fragments that Iamblichus often wrongly reports and misinterprets the thought of his predecessors,¹⁷⁸

¹⁷⁷ The attitude of Guthrie, *History*, V, p. 468, n. 1 is more than puzzling. For against Cherniss' acceptance of Aristotle's testimony he says it is daring to suggest that F 54a is incompatible with Speusippus' view, whereas he himself refers to the Aristotelian evidence in objecting to Merlan's interpretation. *Pace* Guthrie, this question is unrelated to the scanty evidence we have about Speusippus: Aristotle says in 1028 B 21-24 (= F 29a) that soul and magnitude are different οὐσται and that each has its own ἀρχαί, whereas Iamblichus, by including Speusippus' definition among the geometrical conceptions of the soul, is saying that the soul is a magnitude. No additional evidence can alter the fact that either Aristotle or Iamblichus, but not both, may be right, though it is of course conceivable that both may be wrong.

¹⁷⁸ It is ironical that Merlan, *From Platonism*², p. 56, to support his belief in the reliability of Iamblichus' reports in the *De Anima*, should refer to Festugière's notes (cf. note 169), since it is clear from them that Iamblichus manipulates his sources to suit his own purposes. On p. 364, 2-4 (Severus), cf. note 171 *supra*. Iamblichus does not mention that Xenocrates read his own doctrine of soul as self-moving number into *Timaeus* 35 A-B (cf. Plutarch, *De An. Procr. in Tim.* 1012 D-F and 1013 C-D with Cherniss, *Plutarch's Moralia*, XIII, i, pp. 86, n. c; 162, n. b; 163, n. f). On p. 364, 23-25 ("Timaeus"), cf. Festugière, *op. cit.*, pp. 182, n. 8 and 183, n. 1. On p. 366, 12-17, where Iamblichus misuses Aristotle, *De Anima* 405 B 23 ff., cf. Festugière, *op. cit.*, pp. 186, n. 1 and 187, n. 1. Even worse is his manipulation of Aristotle, *De Anima* 404 B 19-24 in p. 364, 12-18 ("Plato"), cf. Cherniss, *Gnomon* 31 (1959), p. 43 with n. 1 = *Selected Papers*, p. 430, which is also important for Iamblichus' use of Aristotle in p. 362, 24-27. Cherniss, *op. cit.*, n. 3 also calls attention to Iamblichus' statement in p. 369, 6-17, where he misuses his source, the passage of Porphyry in p. 350, 13-25. On p. 374, 21-24 cf. Festugière, *op. cit.*, pp. 207, n. 4 and 208, n. 1 and on p. 377, 16-29 cf. p. 216, n. 5. Simplicius, *In Cat.*, p. 41, 21-24 plainly states that Iamblichus misrepresented the text of Alexander he had before him (cf. Cherniss, *op.*

and already in antiquity his accuracy as an interpreter was often questioned even by those who admired him as a philosopher.¹⁷⁹ On the other hand, though Aristotle was not a historian of philosophy, his reports about, and criticisms of, other philosophers are almost always illuminating, when studied critically and in the light of all the extant evidence. And it is uncritical and arbitrary to dismiss his testimony with the vague remark that he often distorts the doctrines of other thinkers; for the essential point is why and in what way he does so. There is no reason at all to cast aside his consistent testimony that Speusippus rejected the separate existence of the ideas (cf. F 33, F 34, F 35, F 36), that he posited numbers—magnitudes—and soul, in this order, as the first three οὐσίαι (cf. F 29a and F 37), and that to each of them he assigned different ἀρχαί. Aristotle's charge that this doctrine makes of nature a series of disconnected episodes is based on his belief that this is the necessary consequence of positing a plurality of material principles (cf. F 37 with comm. *ad loc.*) and on his refusal to admit the relation of similarity between the several ἀρχαί Speusippus posited. It is noteworthy that, though he raises many objections against the doctrines of Plato and of Xenocrates, he explicitly excludes both of them from the charge of making nature episodic. Surely he would not have arbitrarily ascribed to Speusippus the doctrine of many οὐσίαι and ἀρχαί merely because he wished to criticize him on that account.¹⁸⁰

cit., p. 43, n. 3). Also noteworthy is the fact that Iamblichus considered genuine the treatise on the *Categories* by "Archytas" and that he made use of it in his exegesis of Aristotle (cf. Tarán, *Class. World* 68 [1975], p. 467). Cf. also notes 179 and 181.

¹⁷⁹ For references cf. Cherniss, *Gnomon* 31 (1959), p. 43, n. 3 = *Selected Papers*, p. 430.

¹⁸⁰ And so Merlan's attempt (*From Platonism*², p. 45, note) to discredit Aristotle's report on Speusippus in *Metaphysics* 1028 B 21-24 (= F 29a) begs the question. On the other hand, he is quite wrong in thinking that in 1028 B 19-21 Aristotle does not mention the soul because in Plato's system the soul "can be identified with the mathematical." For, even apart from the question of the intermediate mathematical, Aristotle does neither say nor imply that Plato identified the soul with an intermediate mathematical. He does say that the intermediate mathematical are ἀκίνητα (cf. e.g. *Metaphysics* 987 B 16-17), whereas he consistently treats the soul in Plato as movable. Aristotle in 1028 B 19-21 ignores (wrongly, no doubt) the intermediacy of the soul between the ideas and the phenomena; but this is a constant trait of his criticism of Plato. The reason is to be seen in Aristotle's refusal to admit that the soul as self-motion is the ultimate source of all motion and change, and in his treating the self-motion of soul as physical

Even if Iamblichus read Speusippus' definition of the soul in its original context, we need not trust him when he tells us that this is Speusippus' own doctrine and that Speusippus conceived the soul as a geometrical magnitude, for Iamblichus is not beyond distorting a text to suit his own purposes.¹⁸¹ In fact, however, there is no reason to suppose that he had direct access to Speusippus. On the contrary, there are good grounds for thinking that Speusippus' definition of the soul and several of the others he quotes in his *Περὶ ψυχῆς* came to him through one or more intermediate sources. It is also clear that several of the views about the soul Iamblichus cites were originally proposed as interpretations of Plato's meaning in the passage about the "creation" of the soul in the *Timaeus* (34 B ff.).¹⁸² Iamblichus, however, does not say so either because he does not know that this is their origin or because he prefers to keep a discreet silence in order to be able to pursue his own classification. Now, as we shall presently see, there is evidence independent of Iamblichus that Speusippus' definition of the soul had a similar origin; and, since from the point of view of his own philosophy Speusippus could not have meant that the soul is either an idea or a magnitude, it has been reasonably suggested (cf. Cherniss, I, pp. 509-511) that he advanced this definition as an interpretation of Plato's meaning in the *Timaeus* in order to defend Plato against Aristotle's criticism but without himself subscribing to it at all. The very wording of Speusippus' definition, *ἰδέα τοῦ πάντη διαστατοῦ*, suggests that it is related to the *Timaeus*: for *ἰδέα* cf. 35 A 7 *συνεκεράσαστο εἰς μίαν πάντα ἰδέαν* (where *ἰδέα* does not mean "idea" at all) and for *πάντη διαστατόν* cf. 36 E 2 ἢ δ' ἐκ μέσου πρὸς τὸν ἑσχατον

motion. It is this last point that leads him to contend that Plato makes of soul a magnitude (cf. *De Anima* 407 A 2-3), but by this he does not mean that it is an intermediate mathematical. In short, Aristotle's failure to mention the soul in 1028 B 19-21 can be explained as a result of his view that the Platonic system fails to account for efficient causality (cf. Cherniss, I, pp. 376-378, esp. 389-454, 506-512, and 565-580), whereas F 54a is not a reason to doubt the reliability of *Metaphysics* 1028 B 21-24.

¹⁸¹ Thus, for example, though the text of the pseudo-Platonic *Epinomis* was available to him, it is noteworthy how Iamblichus, by twice inserting a few words of his own, makes a consecutive text of three passages which he quotes in the reverse order. Cf. *De Comm. Math. Sc.* VI (pp. 20, 22-22, 5) = *Epinomis* 991 D 5-992 B 2 + 991 B 6-C 3 + 986 C 4-D 4, with Tarán, *Academica*, p. 179.

¹⁸² Cf. notes 171 and 178.

πάντη διαπλακεῖσα.¹⁸³ Since Aristotle criticizes Plato's account in the *Timaeus* because it makes of soul a magnitude (cf. *De Anima* 407 A 2-3 οὐ καλῶς τὸ λέγειν τὴν ψυχὴν μέγεθος εἶναι), Speusippus' interpretation that soul in the *Timaeus* is ἰδέα τοῦ πάντη διαστατοῦ would amount to saying that for Plato there the soul is the form (ἰδέα) of the extended body in the same way as it is an εἶδος for Aristotle himself (cf. Cherniss, I, p. 511 with references). And it is noteworthy that in his review of the theories about the soul Aristotle takes no notice of Speusippus' definition, an omission which would be hard to account for had Speusippus advanced that definition as his own conception concerning the soul.

But neither is it merely the wording nor the fact that in Iamblichus it occurs alongside other definitions originally put forward as interpretations of Plato's meaning in the *Timaeus* that suggests that also Speusippus' definition had a similar origin. For there is evidence that Posidonius adopted it for his own interpretation of the soul in the *Timaeus*. Cf. Plutarch, *De An. Procr. in Tim.* 1023 B (= Posidonius, frag. 141a [Edelstein-Kidd]): ἀπεφήναντο τὴν ψυχὴν ἰδέαν εἶναι τοῦ πάντη διαστατοῦ κατ' ἀριθμὸν συνεστῶσαν ἀρμονίαν περιέχοντα.¹⁸⁴ If also the words κατ' . . . περιέχοντα go back to Speusippus,¹⁸⁵ we must infer either that Iamblichus did not know them or that he purposely omitted part of Speusippus' definition in order to fit it into his classification. Thus the words κατ' ἀριθμὸν and ἀρμονίαν do not accord with his distinguishing between geometrical, arithmetical, and harmonic conceptions of the soul. But even if Posidonius took from Speusippus the first part of his own definition and not the second, his having incorporated Speusippus' ἰδέα τοῦ πάντη δια-

¹⁸³ The words πάντη διαστατόν in Speusippus and in Posidonius (on which cf. the text *infra*), as well as πάντη διαπλακεῖσα in the *Timaeus*, must refer to the tridimensional (cf. Aristotle, *De Caelo* 268 A 7-10 and 24-28), and it is difficult to understand why Gaiser, *op. cit.*, and Tarrant, *Phronesis* 19 (1974), pp. 141-142 think that in Speusippus the soul has a "two-dimensional significance." (Tarrant accepts the essential part of Merlan's interpretation of F 54a, but wishes to take ἰδέα in the sense of "formal imprint" on the basis of Iamblichus, *De Comm. Math. Sc.*, p. 16, 21. Against the ascription of chapter IV of that Iamblichean work to Speusippus cf. pp. 86-107 *supra*.)

¹⁸⁴ Whether or not this is also his own doctrine, it is clear from Plutarch, *De An. Procr. in Tim.* 1023 B-D that Posidonius gave this definition of soul as his interpretation of the *psychogonia* in the *Timaeus*. On Posidonius' definition cf. Cherniss' notes in *Plutarch's Moralia*, XIII, i, pp. 217-223.

¹⁸⁵ These words were meant to be an interpretation of the σύστασις of the soul in *Timaeus* 35 B-36 B, which is summarized in 36 E 6-37 A 1 as λογισμοῦ δὲ μετέχουσα καὶ ἀρμονίας ψυχὴ.

στατοῦ ¹⁸⁶ into his own interpretation of the soul in the *Timaeus* is evidence that in all probability Speusippus himself intended these words to be an interpretation of Plato's meaning. Now in his summary of Plato's doctrines Diogenes Laertius (III, 67 [I, p. 148, 16-17]) says that Plato defined the soul as ἰδέα τοῦ πάντη διεστῶτος πνεύματος. One must say that this ascription, as the word πνεῦμα indicates, goes back to a late Stoic source which combined the Stoic conception of soul as πνεῦμα ἔνθερμον (cf. *SVF*, I, frag. 135; III, p. 251, frag. 49; Posidonius, frag. 139 [Edelstein-Kidd]) with Posidonius' interpretation of the soul in the *Timaeus*. It is noteworthy that Posidonius himself probably did *not* make this combined ascription to Plato, cf. Macrobius, *In Somn. Scrip.* I, 14, 19 (= frag. 140 [Edelstein-Kidd]): *Platon dixit animam essentiam se moventem, . . . , Posidonius ideam*.

In short, the probability is that Speusippus himself put forward the definition of soul as ἰδέα τοῦ πάντη διαστατοῦ as an interpretation of Plato's meaning in the *Timaeus*. Iamblichus, for his part, either because he did not know the context in Speusippus or because he disregarded it in order to fit this definition within the geometrical conceptions of the soul, wrongly thought that Speusippus himself considered the soul to be a geometrical magnitude.

F 55

This fragment comes not from Olympiodorus, as Norvin thought, but from Damascius' lectures on the *Phaedo*. The fact that our text begins with εἴτι does not in this case mean that it is an excerpt. There is evidence that the two commentaries on the *Phaedo* which in the *Marcianus Graecus* 196 follow that of Olympiodorus contain two sets of notes of the lectures on that dialogue given by Damascius probably at different times.¹⁸⁷ There is no reason to think that chapter 177 (= F 55) is displaced, as Dörrie, *Hermes* 85 (1957), p. 421 = *Scripta Minora*, p. 427 contends it is (cf. Westerink, *op.*

¹⁸⁶ It is highly improbable that Posidonius simply happened to hit on these very words independently of Speusippus. Merlan himself admits that Iamblichus got his knowledge of Speusippus' definition from Posidonius. (It ought to be clear that neither in Speusippus nor in Posidonius does the word ἰδέα mean Platonic "idea," cf. Cherniss, *Plutarch's Moralia* XIII, 1, p. 219, n. c.)

¹⁸⁷ On these questions and on the relation of Damascius' lectures to Proclus, cf. Westerink, *Damascius on the Phaedo*, pp. 15-17.

cit., p. 106 *ad loc.*). Damascius is greatly indebted to Proclus' commentary on the *Phaedo*, and so what this text tells us about the views of Speusippus and Xenocrates (= frag. 75 [Heinze]) may come from him. Moreover, since Iamblichus and Plutarch of Athens (or Paterius, cf. Westerink, *op. cit.*, p. 107, n. 3) are said to have held the same opinion as Speusippus and Xenocrates, it is possible that the information concerning their views on the immortality of the soul came to Proclus and Damascius from Iamblichus. Even if this is so, since it is unlikely that Iamblichus had direct access to Speusippus (cf. note 174), the probability is that the ultimate source concerning Speusippus and Xenocrates was some kind of doxographical account where their views were cited.

The reliability of this text has been questioned by Heinze, *Xenocrates*, p. 138, who believes that μέχρι τῆς ἀλογίας (sc. ἀπαθανάτιζουσι) need not imply that Xenocrates ascribed eternal duration ("ewige Dauer") to the irrational soul, since he may simply have meant that the irrational element in the soul survives for a time after the separation of the soul from the body. Jones, *CP* 18 (1923), p. 225 goes further than that, for he contends that, since the commentator "was in utter confusion concerning recent authors, being unable to distinguish, as in the case of Plotinus, between temporary survival of a part of the soul after death, and immortality, he is more likely to have been in error regarding early Platonists." It is difficult to see, however, in what way Plotinus has been misunderstood, since in *Enn.* IV, 7, 14 he does make the point that all soul is immortal. Moreover, the words ἐν ὅπου are evidence of the commentator's awareness of the complicated nature of Plotinus' view on this issue. (For the several other views mentioned in chapter 177, which Damascius and/or his source may have sometimes oversimplified, cf. Dörrie, *op. cit.*, pp. 420-422 = *Platonica Minora*, pp. 426-428 and Westerink, *op. cit.*, pp. 106-109.) However that may be, even if Damascius misinterpreted some recent writers, there is no reason to question his statement about Speusippus and Xenocrates. Iamblichus, Prophyry, Plotinus, and others he could still read himself, whereas what he says about Speusippus and Xenocrates must ultimately have come to him from a doxographical source (cf. *supra*) the reliability of which there is no obvious reason to reject, unless one is also prepared to reject all other such notices. This last point is also valid against Heinze, since the context shows that Damascius means that Speusippus and Xenocrates considered

the soul to be immortal up to, and including, its irrational element. (Heinze's reference to Plato, *Phaedo* 80 D is in any case irrelevant, for the theory in question is rejected by Socrates in so far as the soul is concerned.)

Caution should have been exercised, however, in discussing the meaning of F 55, as several critics have gone far beyond the evidence in drawing conclusions from it. Thus Zeller, II, i, p. 1008 and n. 4 maintains that Speusippus in ascribing immortality to the irrational part of the soul is at variance with Plato, and that the doctrine of transmigration, which Speusippus as an admirer of Pythagoreanism must have held, becomes difficult. Diels, *Dox. Gr.*, p. 539, note, takes this fragment to imply that Speusippus ascribed an eternal mind to animals. U. Dierauer, *Tier und Mensch im Denken der Antike* (Amsterdam, 1977), pp. 99, n. 12 and 272, n. 27, who also thinks that ἀλογία here refers to animals, states that we need not infer from this text that Speusippus and Xenocrates thought that animals are irrational; and he later adduces evidence that according to Xenocrates animals have some kind of knowledge of the divine (frag. 21 [Heinze]). Against all these scholars one may say that ἀλογία here in all probability refers to the irrational soul in man. To begin with, the context indicates Damascius is thinking of the human soul, and the extension to irrational animals occurs only in chapter 199. Secondly, except for Plotinus' view, all the other opinions cited in chapter 177 seem to refer to the human soul. Finally, Iamblichus, who is cited here for the same opinion as Speusippus and Xenocrates, was according to Proclus, *In Tim.* III, pp. 234, 32-235, 9 thinking of the human soul. But even if one takes ἀλογία here to refer to, or to include, the soul of animals, it is impossible to spin out of this text the notion that Speusippus and Xenocrates ascribed reason to animals. Nor is there any way of knowing whether or not Speusippus believed in metempsychosis.

Rees, *JHS* 77, Part I (1957), p. 118 and n. 80 maintains that we cannot infer from this text that Speusippus and Xenocrates believed in the bipartition of the soul, since they may have admitted more than one irrational element in it. But in fact we need not even infer from this fragment that Speusippus and Xenocrates spoke of "parts" of the soul, for they may merely have said that all soul is immortal. (In any case, since μέχρι is inclusive, it is clear that this text ascribes to Speusippus and to Xenocrates the belief in the immortality of the rational soul.) This is what Plato says in the *Phaedrus* both in

the proof of the immortality of the soul and in the subsequent myth (cf. *Phaedrus* 245 C-247 C).

This opinion of Speusippus may come ultimately from his *Περὶ ψυχῆς* (cf. T 1, line 48).

F 56a-b

In Cicero's *De Natura Deorum*, F 56a is part of the doxography given to the Epicurean Velleius. The source of the whole passage (I, 10, 25-15, 41) may have been Phaedrus or Philodemus or an author unknown to us whom also Phaedrus and Philodemus may have used. For the diverse hypotheses on this question cf. Pease, *M.T. Ciceronis De Natura Deorum Libri III*, I (Cambridge, Mass., 1955), pp. 39-42.

This text cannot refer to the One, as Brandis, II, b, i, p. 14 and n. 34 thinks it does, since for Speusippus the One is the principle of mathematical number only (cf. F 34, F 45a, F 51, F 65) and life begins with his third οὐσία, the soul (cf. F 29a). Nor is there any need to suppose with Zeller, II, i, p. 1000, n. 3 that F 56a is about the world-soul. In fact there is no evidence (cf. also on F 83) that Speusippus posited a world-soul and no reason to believe that he did so (cf. F 62 with comm. *ad loc.* and p. 48 *supra*). It is clear that here *animalem* = *animantem* and that, given the context, we must supply *deum* as the predicate of *vim quandam*, as Pease and other commentators do. And even if Speusippus wrote θεῖος¹⁸⁸ and not θεός, it is still very likely that he meant "divine" in the sense of "god," for there is evidence that he referred to god in terminology reminiscent of Plato's *Timaeus*; and so it is likely that Speusippus thought that the living power which rules the universe is god (cf. F 28, lines 13-14 with comm. *ad loc.* and pp. 47-48 *supra*). (On the possible theological implication of F 58 cf. *ad loc.*) The rest of this fragment contains the Epicurean criticism, for Speusippus' conception of the divinity is incompatible with the ἀταραξία of the Epicurean gods.

Minucius Felix (F 56b) depends on Cicero. This ought to be obvious to any reader of the two works, i.e. the *Octavius* and the *De Natura Deorum*, though M. van den Bruwaene, *Cicéron, De Natura*

¹⁸⁸ N.b. how in his report on Aristotle (*De Natura Deorum* I, 13, 33), the Epicurean source has in all probability rendered as θεός Aristotle's θεῖον (cf. Cherniss, I, pp. 592-593).

Deorum, *Livre premier* (Bruxelles, 1970), p. 84, n. 2 is prepared to deny it, apparently on the ground that Minucius Felix does not follow the order of Cicero's doxography, nor its exact wording, either.

F 57

For the text of this fragment and for information about it I am indebted to Professor Albert Henrichs of Harvard University who is preparing a new edition of the first part of Philodemus' *De Pietate*, which contains the Epicurean exposition and critique of the theological views of the Greek poets, mythographers, and philosophers. Of Henrichs' several publications on this subject cf. especially "Towards a New Edition of Philodemus' Treatise *On Piety*," *GRBS* 13 (1972), pp. 67-98; "Die Kritik der stoischen Theologie im P. Hercul. 1428," *Cronache Ercolanesi* 4 (1974), pp. 5-32; "Two Doxographical Notes: Democritus and Prodicus on Religion," *HSCP* 79 (1975), pp. 93-123. In the article mentioned last (pp. 94-95) the author gives an inventory of the several fragments of Pap. Hercul. 1428 which contain the first part of Philodemus' treatise. On p. 95 the lines of frag. 22 (<Speusippus> + 'Αριστοτέλης) should read fr. 22, 1-10 and fr. 22, 10-12 (instead of 1-8 and 9-13).

The text of F 57 printed here is based on Henrichs' new collation of the papyrus. He informs me that, since there are neither letters nor traces of letters in the *disegni* which are not still visible in the papyrus, whereas there are letters in the papyrus which have not been reported in the *disegni*, the latter are worthless for constituting the text of F 57. T. Gomperz, the latest editor of Philodemus' *De Pietate*, based his text on the *disegni*; his use of the papyrus itself was seemingly confined to inspection of the title page (cf. his letter to Diels in *Dox. Gr.*, pp. 529-530). Now the lines in Philodemus which Diels, Lang, and others have taken to refer to Speusippus are followed by a reference to the third book of Aristotle's *De Philosophia* and are *physically* connected in the papyrus with frag. 21, which is concerned with Antisthenes (Diels, *Dox. Gr.*, p. 538, col. b, note, was not aware of this last fact). Since in Cicero's *De Natura Deorum* I, 12, 31-13, 33 we find the succession Antisthenes-Speusippus-Aristotle's *De Philosophia*, book three (= frag. 26 [Rose]), and since the Epicurean doxography in Cicero's *De Natura Deorum* is in many ways parallel to that in Philodemus' *De Pietate* (cf. Diels, *Dox. Gr.*, pp. 531-550), it is possible that lines 1-10 of frag. 22 of the

latter work, which as extant are anonymous, do indeed refer to Speusippus. And this parallel with Cicero is really the only basis for thinking that these lines refer to him.

Though Henrichs has succeeded in recovering some of the readings of lines 1-5 of frag. 22 of the *De Pietate* (where line 2 so far as preserved is without writing¹⁸⁹), the text is so fragmentary that it is impossible at present to get any meaning out of them, with the exception of the οὐδέ preceding Sauppe's restoration τὰς. We may therefore infer that we have here part of Philodemus' criticism of Speusippus, and the meaning may be something like, "not even when he (sc. Speusippus) says that the souls of the beautiful and good (men?) are divine powers but much more wanting and imperfect (than god or gods?)." The context is at any rate different from the corresponding passage in Cicero (= F 56a), the only possible parallel being between Cicero's *vis* and Philodemus' δυνάμεις. If F 57 does indeed refer to Speusippus, it seems that he, like Plato (cf. note 25), considered good men to be divine, though much inferior (to god?). This text then, even if it refers to Speusippus, adds little to our knowledge of his philosophy.

F 58

Krische, *Forschungen*, p. 256 contends that, since mind is identical neither with the One nor with the good, Speusippus must have conceived God-*nous* as the absolute principle above all opposites, including the One and plurality. Zeller, II, i, pp. 713, n. 1 and 1000 with n. 2, in accordance with his interpretation of F 56a, where he sees the identification of the world-soul and god, believes that Speusippus also identified the world-soul with God-*nous*. Guthrie, *History*, V, p. 463 with n. 2 maintains that Speusippus like Plato identified God with mind, that he saw him as the creator of the universe (cf. F 28, lines 13-14), and that presumably God-*nous* is "another of the unconnected primary essences of which Aristotle complained." Much more radical than the preceding interpretations is that proposed by Krämer, *Ursprung*, pp. 214-218 (cf. also pp. 125, 136, 327, 353, 367, n. 640, 376-377, 378, n. 18), who uses this fragment for his purpose of making Speusippus a precursor of Neoplatonism. For he argues that, since God-*nous* has its own peculiar

¹⁸⁹ A fact for which, Professor Henrichs tells me, he can offer no explanation.

nature, as do the One and the good, since goodness belongs to the realm of soul, and since *nous* cannot be the ἀρχή of soul, as soul is movable, it follows that God-*nous* belongs to the realm of numbers. Then, citing F 28, lines 13-14, he concludes that Speusippus identified *nous* with numbers, especially with the decad “und die zugehörigen geometrische Figuren,” and that there is in God-*nous* identity of subject and object of thought.

Except for Zeller’s interpretation, which is at least possible, the others mentioned above go beyond the evidence and contradict Aristotle’s testimony. But a few remarks on the nature of Aetius’ statement are in order before we discuss this text and relate it to the rest of our evidence about Speusippus. The context in Aetius suggests that something like θεὸν ἀπεφάνηται is to be supplied (cf. e.g. Aetius I, 7, 25 [p. 303 b 15-16], on Boethus). We must, however, bear in mind two things: First, that Speusippus may simply have said that *nous* is identical neither with the One nor with the good but has its own peculiar nature, and not at all that *nous* is god. For *nous* was frequently associated and/or identified with god or the divine, and it would therefore be quite possible for a doxographer, be it Aetius or his ultimate source, to take such a statement as Speusippus’ to refer to the divinity, and so to cite it in a list of opinions about τίς ἐστὶν ὁ θεός or Περὶ θεοῦ. Second, that, even if Speusippus said ὁ νοῦς θεός ἐστὶν, he may have meant that mind, i.e. *any* mind, is divine. (It is noteworthy that ὁ νοῦς seems here to be the subject and θεός the predicate.) Or he could have meant that mind is the very nature of god, or both that mind is divine and that god is mind.

Let us suppose, however, that Speusippus did indeed say that god-*nous* is identical neither with the One nor with the good but is ἰδιοφυής. He certainly could not have meant to place god-*nous* above the One, as Krische would have it, for Aristotle states that, beginning with the One, Speusippus posited numbers, magnitudes, and soul, in this order (cf. *Metaphysics* 1028 B 21-24 = F 29a; 1075 B 37-1076 A 4 = F 30; 1090 B 13-21 = F 37), and that for him numbers are the first entities (cf. 1080 B 14-16 = F 33; 1083 A 23-24 = F 34). Nor, *pace* Guthrie, can god-*nous* be one peculiar kind of οὐσία, since Speusippus could hardly have placed it below the soul. Rather, one must with Krämer raise the question, where within the first three kinds of οὐσίαι Aristotle mentions, numbers-magnitudes-soul, does *nous* or god-*nous* belong. Certainly it cannot belong with

numbers and/or magnitudes. F 28, lines 13-14 and also the preceding lines (F 28, lines 10-13) make it absolutely clear that the decad (and hence also *all* numbers) has *separate* existence, that it exists before "the act of creation," and that it is the model of the creating god.¹⁹⁰ It is only by wrongly taking προεκκειμένη in F 28, line 14 to mean "pre-expliziert" rather than "pre-existing," that Krämer tries to spin out of this passage the identity of the divine intellect with the decad.

But what has ultimately misled Krische, Guthrie, and others is their misunderstanding of the implications of the adjective ιδιοφυής. This word may, *but need not*, mean that something has its own φύσις in the sense that it is different from any other kind of entity. It may also refer to something that makes a thing peculiar even within a whole class of things of the same nature. Thus, Diodorus V, 30, 3, speaking *à-propos* of the Gauls, says: σάλπιγγας δ' ἔχουσιν ιδιοφυεῖς καὶ βαρβαρικὰς. This means that the Gaulish trumpets have their own peculiar nature; but they are nevertheless σάλπιγγες. Since in F 58 Speusippus is saying that *nous* is identical neither with the One nor with the good but has its own peculiar nature (ιδιοφυής), it follows that it is in a different class from that of the One and also from that of the good. But this certainly does not prevent *nous* from having unity and goodness as predicates.¹⁹¹ Moreover, the fact that *nous* has its own peculiar nature in respect to the One and the good does not prevent it from being a "part," or a "faculty," or a "state" of the soul. Nothing in F 58 or anywhere else in our evidence about Speusippus implies that *nous* is an entity different from the soul. And, if Speusippus' first three οὐσίαι were numbers, magnitudes, and soul, we can assert with great probability that *nous* must be related to the soul in one of the ways mentioned above. If this is so, and if *nous* is soul enlightened by knowledge, then it is intelligible why Speusippus declared *nous* to be divine and/or the divinity to be *nous*. Thus, for example, Plato in the *Timaeus* says that the work of the Demiurge is that of *nous* (47 E 3-4) and that *nous* exists only

¹⁹⁰ Cf. the several notes on F 28, lines 10-14. The act of "creation" is to be taken in a metaphorical sense, I believe. Cf. p. 47 *supra* with F 61a-b.

¹⁹¹ Here the case is different from the question concerning the relation of the One to the good; for Aristotle's own report of the reasons why Speusippus denied the identity of the One and the good also requires us to suppose that he denied the predicate goodness to the One. Cf. F 42a, F 44, F 45a, F 46a with the respective comments.

in soul (30 B 3 νοῦν δ' αὖ χωρὶς ψυχῆς ἀδύνατον παραγενέσθαι τῷ; 46 D 5-6 τῶν γὰρ ὄντων ᾧ νοῦν μόνῳ κτᾶσθαι προσήκει, λεκτέον ψυχὴν; cf. further Tarán, *Creation Myth*, p. 395, n. 34 with references).

It is uncertain whether or not Speusippus' statement that *nous* is identical neither with the One nor with the good had a polemical intent. But if it had, we cannot be certain as to who was the butt of his attack. The identification of the One with the good and with *nous* is sometimes ascribed to Plato (cf. e.g. Aetius I, 7, 31 [pp. 304-305]); but this contradicts the testimony of Aristotle, who only ascribes to Plato the identification of the One with the good (cf. *contra* note 161 *supra*). Xenocrates, on the other hand, is a possibility (cf. e.g. Aetius I, 7, 30 = Xenocrates, frag. 15 [Heinze]), particularly if Aristotle is right in reporting that he identified the One with the good (cf. pp. 43-44 *supra*).

As was said above, Zeller's interpretation of this fragment is possible; but only if his interpretation of F 56a is correct, which it probably is not (cf. *ad loc.* and on F 62a). It is a question, however, whether F 58 itself refers primarily to god (cf. *supra*). It is at least as likely that it refers primarily to *nous*. And it is therefore better to say in conclusion that Speusippus in all probability considered *nous* to be a function or part of the soul, that *nous* is the divine element in the soul, and that god is *nous*. For the soul as the "organ" of knowledge cf. F 36 with comm. *ad loc.* and note 119 there.

F 59

Three main problems have been discussed in reference to this text. (a) Does 6 A 23-B 5 (= lines 1-8) refer to Plato or not? (b) Do the words χρόνον δ' ἅμα καὶ οὐρανὸν καὶ ἕτερα δὴ πλείω (6 B 3-4 = lines 6-7) belong to the text and, if they do, how are they to be construed? (c) What is the relation of Theophrastus' testimony concerning Plato in 6 B 11-15 (= lines 12-14) to the alleged identification of ideas and numbers which Aristotle sometimes ascribes to him? The question mentioned last need not be discussed here, since it does not affect our understanding of Speusippus, though one may say that Theophrastus' testimony cannot be reconciled with that of Aristotle and that in all probability both misrepresent Plato's doctrine (cf. Cherniss, *Riddle*, pp. 25-30, 33-37, 43-44, 47-48, 50-59; *AJP* 68 [1947], pp. 249-251 = *Selected Papers*, pp. 200-202; Vlastos, *Gnomon* 35 [1963], pp. 647-649 = *Platonic Studies*, pp. 389-391).

As to question (b), the words in 6 B 3-4 probably belong to the text; and one must with Ross (note *ad loc.*) supply γεννώσι from γεννήσαντες in 6 A 25.¹⁹²

In the case of (a), a majority of scholars have seen in 6 A 23-B 5 a reference to Plato. Among them one may mention Zeller, II, i, p. 950, n. 1; Robin, *Idées et Nombres*, n. 275, IV (pp. 316-317);¹⁹³ Ross, in Ross-Fobes, *Theophrastus, Metaphysics*, pp. 50-56; *Plato's Theory of Ideas*² (Oxford, 1953), pp. 210-211; Aristotle, *De Anima*, pp. 177-178; Van der Wielen, *De Ideegetallen van Plato* (Amsterdam, 1941), pp. 139-142, 160, 177-178, 184-187; Tricot, *Théophraste, La Métaphysique*, notes in pp. 14-15; Burkert, *Lore and Science*, pp. 26-27 with note 58; Untersteiner, *Aristotele, Della Filosofia* (Roma, 1963), p. 153; Gaiser, *Platons ungeschriebene Lehre*, pp. 493-494; Krämer, *Ursprung*, p. 205, n. 34; Kullmann, *Wissenschaft und Methode*, p. 146. Several of these scholars have tried to support this interpretation with the contention that Aristotle, *De Anima* 404 B 18-27 exhibits the same doctrine as 6 A 23-B 5 and that it also refers to Plato; and Ross cites to the same effect Aristotle, *Metaphysics* 1084 A 32-36. It may be said at once, however, that neither of these two passages of Aristotle refers to the doctrine found in 6 A 23-B 5. Moreover, it has been shown that both *Metaphysics* 1084 A 32-36 and Aristotle, *De Anima* 404 B 18-27 refer to Xenocrates, not to Plato (on the former passage cf. Cherniss, *AJP* 68 [1947], n. 86 on pp. 244-246 = *Selected Papers*, pp. 195-197; on the latter see Appendix II). Furthermore, in 6 B 6-15 (= lines 8-14) Xenocrates, Hestiaeus, and Plato are *explicitly* cited as exceptions to the

¹⁹² The words in question (which were also part of the Greek text available to the Arabic translator of the *Metaphysics*, cf. Margoliouth, *op. cit.*, in note 266 *infra*, p. 197) were excised by H. Ritter, by Usener, and by Reale, *op. cit.*, in the text *infra*, p. 178, n. 14. Isnardi Parente, *Phronesis* 16 (1971), pp. 54-55 with n. 12, for her part, would keep the words and supply γεννώσι, but she proposes to take them with the preceding words, placing a comma after καὶ ἀλλ' ἅρτα and a stop after πλείω. Now, though the words χρόνον δ' ἅμα καὶ οὐρανὸν καὶ ἕτερα δὴ πλείω are omitted by J, they appear in all the other MSS and must not be excised, since there is no ostensible reason for their insertion. Nor is there any difficulty in understanding γεννώσι from γεννήσαντες in 6 A 25. Isnardi Parente's proposal must be rejected, however, for it produces clumsy Greek, not to mention the philosophical nonsense of ascribing the derivation of οὐρανός from numbers and the One to a theory that posits the One and the Indefinite Dyad as the supreme principles.

¹⁹³ It is noteworthy that Robin, *op. cit.*, n. 426 (p. 486), despite his ascription of 6 A 23-B 5 to Plato, states that the derivation of soul from numbers and the One "ne se rapporte pas à Platon."

procedure employed by the philosophers of 6 A 23-B 5, and so this last passage certainly cannot refer to Plato at all (cf. Cherniss, *AJP* 68 [1947], pp. 236-237 with note 78 = *Selected Papers*, pp. 187-188; Reale, *Teofrasto e la sua aporetica metafisica*, pp. 176, n. 9; 177, nn. 11 and 12; 179, n. 18; Tarán, *AJP* 87 [1966], p. 471; Isnardi Parente, pp. 766-768 and *Phronesis* 16 [1971], pp. 49-64).¹⁹⁴ Finally, it has hitherto gone unnoticed that the system Theophrastus ascribes to Plato in 6 B 11-15 differs from that of 6 A 23-B 5 in essential doctrinal aspects, and not merely in that in the latter the derivation is carried up incidentally and only to a certain point whereas Plato reaches the individual things. For according to Theophrastus the philosophers of 6 A 23-B 5 presumably generated numbers and magnitudes (or numbers alone) from the One and the Indefinite Dyad, and he explicitly states that they derived *τόπος*, *κενόν*, and *ἄπειρον* from the Indefinite Dyad, but soul and some other things from numbers and the One. The ideas are not mentioned at all, and so we may infer that either these philosophers did not posit ideas, or that, if they did, they either identified them with numbers or derived them, as they did derive the soul, from numbers and the One. But the derivation system Theophrastus ascribes to Plato is this: from the principles (presumably the One and a material *ἀρχή*, whatever its name) come the numbers, from the numbers the ideas, and from the ideas the other things.

In short, we do not know who the philosophers of 6 A 23-B 5 are. Since Speusippus allegedly proceeded as they did, it is necessary to say that the doctrine of 6 A 23-B 5 cannot be ascribed to him. For

¹⁹⁴ Burkert, *op. cit.*, p. 27, note 58, in order to save the interpretation he first advanced in 1962, states that Plato need not be excluded from the philosophers of 6 A 23-B 5 because *μέχρι τῶν εἰρημένων* in 6 B 15 "looks back at A 23 ff." The context, however, proves this to be impossible. For it is clear that Theophrastus considers that the philosophers of 6 A 23-B 5 proceed with the derivation up to a certain point but only incidentally, and so he characterizes their procedure as dealing only with the *ἀρχαί* (cf. also Theophrastus' words in 6 A 15-22, which introduce his criticism of the philosophers of 6 A 23-B 5). To them Xenocrates is an exception; and also Hestiaeus, who tries up to a point to assign everything to its place in the universe *οὐχ ὥσπερ εἴρηται περὶ τῶν πρώτων μόνον* (6 B 10-11). Then he mentions Plato's procedure and contrasts him, too, with the philosophers of 6 A 23-B 5, cf. 6 B 15-16: *οἱ δὲ τῶν ἀρχῶν μόνον*. It should be obvious that *μέχρι τῶν εἰρημένων* refers to *τῶν ἄλλων* in 6 B 12-13, and these are the individual things that, according to Theophrastus, Plato derives from the ideas. Cf. also the remarks that follow.

he posited the One and $\pi\lambda\tilde{\eta}\theta\omicron\varsigma$ as the principles of mathematical number only (cf. on F 38, line 1 with note 130 and F 45a with comm. *ad loc.*) and different $\acute{\alpha}\rho\chi\alpha\iota$ for numbers, magnitudes, and the soul (cf. Aristotle, *Metaphysics* 1028 B 21-24 = F 29a, with comm. *ad loc.*). The comparison between him and the philosophers of 6 A 23-B 5 is limited then to the fact that also he failed to discuss in detail the derivation of things from the principles, with the exception of numbers, magnitudes, and the soul. In fact, all that this text presumably tells us about Speusippus is that he paid little attention to the physical world (cf. Zeller, II, i, p. 1006; Cherniss, I, p. 484), at least in its "derivational" aspect, since there is evidence that in his work on classification and division he did deal with it (cf. F 6-27, F 66a-b, F 67, and, from a different point of view, F 60 and F 62).

F 60

Since he interprets literally the creation myth in Plato's *Timaeus*, Plutarch believes that before the creation of the universe there was precosmic motion, but that time came to be together with the universe. The universe is an $\epsilon\lambda\kappa\omega\nu$ of god's essence, and time of his eternity. Plutarch practically identifies time with the activity of the rational world-soul. It follows then that for Plutarch time cannot be simply an accident or an attribute of motion; and, because he thinks they do so consider time, he criticizes the definitions of it given by Aristotle (cf. *Physics* 219 B 1-2, 220 A 24-25, 220 B 32-221 A 1, 221 B 7 with Cherniss, *Plutarch's Moralia*, XIII, i, p. 84, n. a), by Speusippus, and by some of the Stoics (cf. *SVF*, II, frags. 509-510, 515; I, frag. 93 with Cherniss, *op. cit.*, p. 84, n. c). On the whole of chapter 4 of Plutarch's *Quaest. Platon.* VIII cf. Cherniss' translation and annotation in *op. cit.*, pp. 83-91.

Zeller, II, i, p. 1007 and n. 4 takes Speusippus' definition of time as $\tau\omicron\ \acute{\epsilon}\nu\ \kappa\iota\nu\eta\sigma\epsilon\iota\ \pi\omicron\sigma\acute{\omicron}\nu$ to mean "die Grösse in der Bewegung," and wonders "ob mit dieser Definition die Grösse der Bewegung (eigentlich: auf dem Gebiete der Bewegung), oder die in Bewegung befindliche Grösse (die Bewegung des Räumlichen) gemeint ist." But the definition, particularly in the context in which it occurs, can hardly mean anything but "what in motion is quantitative" (Cherniss, *op. cit.*), that is to say that for Speusippus time is the measure of motion. $\tau\omicron\ \pi\omicron\sigma\acute{\omicron}\nu$ here cannot refer to size at all. Cf., with Cherniss, *op. cit.*, p. 84, n. b, Strato's $\tau\omicron\ \acute{\epsilon}\nu\ \tau\alpha\tilde{\iota}\varsigma\ \pi\rho\acute{\alpha}\xi\epsilon\sigma\iota\ \pi\omicron\sigma\acute{\omicron}\nu$, and Simplicius, *In Phys.*, pp. 789, 33-790, 2 (= Strato, frag. 76[Wehrli]).

Plutarch implies that the definitions of time he criticizes were inspired by Plato's *Timaeus* (cf. esp. 38 C 5-6), and this is likely enough at least in the case of Speusippus and Aristotle, since their conceptions seem to be ultimately related to Plato's account of time in that dialogue.

F 61a-b

After refuting the creation myth in the *Timaeus* because Plato says that the universe, though it came into being, is everlasting (*De Caelo* 279 B 17-31), Aristotle reports and refutes (279 B 32-280 A 10 = F 61a) a defense of Plato by some Platonists (τινές).¹⁹⁵ These thinkers maintain that the creation of the universe in the *Timaeus* was meant only διδασκαλίας χάριν, and they compare it to the procedure of geometers who construct figures for the same purpose. This interpretation of Plato's meaning most of our sources ascribe to Xenocrates (cf. the texts assembled by Heinze under frags. 33 and 54), but an anonymous *scholion* in *Codex Parisinus Graecus* 1853 (E), p. 489 A 9-12 (= F 61b) ascribes it to both Xenocrates and Speusippus. Some scholars (e.g. Zeller, II, i, p. 1008, n. 3; Jones, *Platonism of Plutarch*, pp. 75-76; Vlastos, in *Studies in Plato's Metaphysics* [ed. R. E. Allen, London, 1965], p. 383, n. 2) have expressed doubts concerning the attribution to Speusippus of the metaphorical interpretation of the creation myth in Plato's *Timaeus*, on the ground that his name occurs only in F 61b and not in any other of the related sources (Plutarch, Proclus, and Simplicius).¹⁹⁶ This attitude towards the evidence, however, is surely hypercritical. For one thing, one should not so readily dismiss, nor question the reliability of, evidence which has been preserved only by a scholiast; for *scholia* are frequently the only remains of old commentaries. Moreover, it is not likely that a medieval scholiast would have arbitrarily added Speusippus' name to that of Xenocrates, since by that time Speusippus certainly was not a famous,

¹⁹⁵ On the question of the metaphorical interpretation of the *Timaeus* cf. my paper *Creation Myth* with references to earlier discussions.

¹⁹⁶ Jones' contention that Aristotle, *Metaphysics* 1091 A 35-36 = F 44 (ἀλλὰ προελθούσης τῆς τῶν ὄντων φύσεως καὶ τὸ ἀγαθὸν καὶ τὸ καλὸν ἐμφαίνεσθαι) implies that for Speusippus the world-soul is a created entity must surely be rejected. For Aristotle does not refer to the soul at all and does not imply a cosmogonic process, either. All Aristotle is saying (cf. also F 42a and F 43) is that according to Speusippus the beautiful and the good are in what comes from the ἀρχαί, not in the ἀρχαί themselves (cf. further pp. 51-52 *supra*).

nor a well known philosopher. Furthermore, it is noteworthy that the evidence on this question is not so uniform and consistent as the critics mentioned above suppose it is. Thus, Simplicius, *In De Caelo*, p. 303, 33-34 states that Aristotle's refutation of the metaphorical interpretation of the *Timaeus* is directed πρὸς Ξενοκράτην μάλιστα καὶ τοὺς Πλατωνικούς, among whom he may well have meant to include Speusippus. Plutarch, *De An. Procr. in Tim.* 1012 D-1013 B mentions only Xenocrates and Crantor¹⁹⁷ among the old Platonists who opposed the literal interpretation of the creation myth, while Proclus, *In Tim.*, I, p. 277, 8-10, in the same connection, refers to Crantor and to no one else. And none of these three authors mentions Heraclides Ponticus, though he, too, probably gave a similar interpretation of Plato's myth (cf. note 199). Finally, Aristotle's wording in F 61a, ἀλλὰ διδασκαλίας χάριν ὥς μᾶλλον γνωριζόντων, ὥσπερ τὸ διάγραμμα γιγνόμενον θεασάμενος, is similar to that of a fragment where Speusippus is reported to have said that geometrical constructions are only for the sake of knowledge (cf. F 72, lines 9-11 τὰς δὲ γενέσεις αὐτῶν οὐ ποιητικῶς ἀλλὰ γνωστικῶς ὁρῶμεν ὥσανεὶ γιγνόμενα λαμβάνοντες τὰ ἀεὶ ὄντα).

In short, then, there is no reason to question the reliability of F 61b. It is clear that the Platonists cited the procedure of geometricians as an analogy to Plato's description of the creation of the universe by the Demiurge. And they must have meant that, like the geometrician who constructs a figure for the sake of explaining its nature, Plato speaks of a precosmic state of affairs and of the Demiurge's work to bring this chaos into order, so as to point out the nature of law, order, and purpose in the cosmos, but without literally meaning that the act of creation actually took place. Aristotle's rejoinder to the metaphorical interpretation, however, begs the question in as much as he assumes that the precosmic chaos is to be taken literally. This assumption makes him contend that the analogy with a geometrical construction is inappropriate; for, if in both instances all the elements are given at the same time, in the case of the geometrical construction there is no contradiction,

¹⁹⁷ Cf. Cherniss, *Plutarch's Moralia*, XIII, i, p. 170, n. c. Guthrie, *History*, V, p. 303 with n. 1 seems to ascribe to Crantor, Speusippus, and Xenocrates the view that "generated" means dependent upon an external cause. But among the old Platonists our sources ascribe this notion to Crantor only (cf. Cherniss, *op. cit.*, p. 170, n. a).

as there is between the precosmic and the cosmic state of affairs. And so he concludes to his own satisfaction that there must be γένεσις to pass from the former to the latter.

Consequently, Aristotle's refutation does not touch the point at issue between him and the partisans of the metaphorical interpretation of the creation myth in Plato's *Timaeus*. It is based upon a similar disregard of the position of the Platonists as that which causes him to argue in *Metaphysics* 1091 A 12-13 and 23-29 (= F 41) that, despite their contention to the contrary, the Platonists really generate the numbers and do not do so merely τοῦ θεωρησάι ἔνεκεν.¹⁹⁸

It is possible that Speusippus and Xenocrates said that when the Pythagoreans spoke of the formation of the cosmos they, too, meant it in a metaphorical sense. But, even if they did so,¹⁹⁹ it does *not* follow that "Speusippus and Xenocrates gave out their interpretation of the *Timaeus* as Pythagorean doctrine," as Burkert, *Lore and Science*, p. 71 says. And it is worse than irrelevant to cite in this connection *Metaphysics* 1091 A 13 ff. (cf. Burkert, *op. cit.* with n. 119) = F 41, for in that passage Aristotle is trying to show that all those who think that numbers are the substances and elements of things do generate the entities which they themselves hold to be eternal (i.e. the numbers). It is noteworthy that Aristotle himself dismisses the Pythagoreans because they κοσμοποιοῦσι καὶ φυσικῶς βούλονται λέγειν. In short, Aristotle provides no evidence that he thought that Speusippus and Xenocrates advanced the metaphorical interpretation of the *Timaeus* as Pythagorean doctrine;

¹⁹⁸ On the several expressions used in connection with the metaphorical interpretation of the creation myth cf. Cherniss, *op. cit.*, pp. 168, n. e and 169, n. f. Cf. also the following note.

¹⁹⁹ Burkert, *Lore and Science*, p. 71 with n. 117 cites Aetius II, 4, 1 and Sextus, *Adv. Math.* X, 255 in both of which we find κατ' ἐπίνοιαν. Yet our sources do not ascribe this expression either to Speusippus or to Xenocrates, whereas there is some probability that it is to be attributed to Heraclides Ponticus. Cf. Tarán, *Creation Myth*, p. 404, n. 143. (As for Proclus, *In Timaeum*, I, p. 290, 3-17, however, I overstated my case. For it is not true that Proclus is there aware of two different wordings in reference to the metaphorical interpretation of the *Timaeus*: κατ' ἐπίνοιαν μόνην and σαφηνείας ἔνεκα διδασκαλικῆς. With the first Proclus is referring to the metaphorical interpretation in general, while the latter expression is a specific designation of one kind of metaphorical interpretation. Nevertheless, even this passage of Proclus shows that there is no reason to conflate both expressions, as Burkert implicitly does in ascribing κατ' ἐπίνοιαν to Speusippus and Xenocrates.)

nor yet that Speusippus and Xenocrates ascribed to the Pythagoreans a metaphorical view of the cosmogonic process as such.²⁰⁰

F 62

Context. At the beginning of the *De Motu Animalium* (698 A 7-11),²⁰¹ Aristotle assumes his doctrine of the unmoved mover as the ultimate source of all motion. In chapters 1-2 he argues that the movement of animals requires two things: (a) something *in* the animal which is unmoved in respect to a given motion of which it is the source; (b) something *outside* the animal which is at rest and immovable. Since the latter principle is a general one and applies also to the universe, Aristotle raises the question of the relation of the cosmic mover to the universe as a whole (chapters 3-4). He maintains that the mover of the universe must be immovable, and that as such it can be neither a part of the universe nor inside the universe. For if the celestial mover is itself movable, it must move by being in contact with something immovable which cannot be part of the mover; on the other hand, if the mover is itself immovable, it cannot be part of what it moves. Aristotle therefore expresses qualified approval of a theory which maintains that no part of the rotating sphere can be at rest. This view, which he immediately rejects for other reasons, is probably Speusippus' (cf. on lines 5-11 = 699 A17-24). The main thrust of Aristotle's argument, however, is directed against Plato's theory of the world-soul as the mover of the universe (cf. 699 A 27-B 11 with Cherniss, I, p. 558).

5-11 καὶ . . . ποιοῦσιν. Cherniss, I, pp. 558-559 and *Riddle*, p. 64 with n. 23 argues with great plausibility that the view that no part of the rotating sphere can be at rest because in that case either the whole sphere would be stationary or its continuity would be disrupted, must be ascribed to Speusippus. For Aristotle says that those who so argue also claim that the moving force is inherent in the celestial poles which are points without magnitude, and the sub-

²⁰⁰ Against this tendency of Burkert and others who think that Speusippus must have ascribed just about all his doctrines and even those of Plato to the Pythagoreans cf. also on F 28, lines 7-8 with note 68 and comm. on F 48.

²⁰¹ On the Aristotelian authorship of the *De Motu Animalium* cf. Jaeger, *Hermes* 48 (1913), pp. 31-55 = *Scripta Minora*, I, pp. 59-83; P. Louis, *Aristote, Marche des animaux. Mouvement des animaux* (Paris, 1973), p. IX; Nussbaum, *Aristotle's De Motu Animalium*, pp. 3-12.

stantiality of the point is a doctrine that, so far as we know, Aristotle ascribes only to Speusippus.²⁰²

Cherniss takes the sentence οἱ λέγοντες ὅτι κύκλῳ φερομένης τῆς σφαίρας οὐδ' ὅτι οὖν μένει μόριον to refer to the whole of the celestial sphere; and so according to him Speusippus supposed the earth to be in motion. In favor of this interpretation one can adduce, as Cherniss does, the fact that in criticizing Plato's conception of an internal mover of the universe Aristotle emphasizes the immobility of the earth in Plato's theory. This interpretation, however, is not necessary, since the words quoted above may refer merely to the outer sphere of the universe. In that case, too, Aristotle's point in favorably contrasting Speusippus' view of the celestial mover with that of Plato remains valid. For Aristotle takes Plato to mean that the celestial axis causes the heaven to turn about the poles (cf. Cherniss, I, pp. 540 and 558), whereas in the view here tacitly ascribed to Speusippus the mover is not part of the celestial sphere, since the poles are points without magnitude. However that may be, since Speusippus' argument that no part of the rotating sphere can be at rest is general, we may infer that he must have explained the planetary motions in the same way as he explained that of the celestial sphere. And this explanation of the celestial motions makes it unnecessary to postulate a world-soul in order to explain them. Since the only extant text that might refer to the world soul is F 56a, and since this text most probably refers to god and not at all to the world-soul (cf. comm. *ad loc.*), it is more probable than not that Speusippus did not posit a world-soul. In fact, it is quite possible that Speusippus himself criticized Plato's theory of the world-soul as the celestial mover.

F 62 is then additional evidence of Academic interest in the question of the relation between the mover and the cosmic motions. In

²⁰² Cf. on F 38, 1 with note 133; *Metaphysics* 1085 A 32-34, 1085 B 27-34 (= F 51) and 1090 B 5-13 (= F 50); cf. also pp. XXIV-XXV *supra*. With the treatment of the point as an "extreme" in the last mentioned passage cf. the words τοὺς πόλους οἰονταί τινα δύναμιν ἔχειν, οὐδὲν ἔχοντας μέγεθος ἀλλ' ὄντας ἔσχατα καὶ στιγμᾶς in F 62. It is only because of the substantiality of the non-material point that Cherniss ascribes the doctrine of 699 A 17-24 to Speusippus (his argument has been misunderstood by Nussbaum, *op. cit.*, p. 298). It is for this very reason that *De Motu Animalium* 699 A 17-20 cannot refer to the Pythagoreans, as Farquharson thinks it does (cf. his note in the Oxford translation, followed by Louis, p. 164, n. 3 to p. 55), since the Pythagorean numbers are points which have magnitude (cf. on F 29a with note 82 there, and F 33 with comm. *ad loc.*).

addition to Aristotle's own theory of the unmoved movers of the celestial spheres and to Plato's theory of the world-soul, we may refer also to passages such as Plato, *Laws* 898 A-B, 898 E-899 B, and [Plato], *Epinomis* 986 B. And, if Cherniss is right in his interpretation of this fragment, Speusippus' theory was also probably related to the question of the "sleeping" circles mentioned by Plato in *Laws* 893 C-D.

Aristotle advances two arguments in refutation of Speusippus' explanation of the cause of the celestial sphere's motion. The first is that points cannot have substantial existence. The second, that a single (celestial) motion cannot be caused by *two* poles. The latter contention is no argument at all. The former turns on Aristotle's and Speusippus' differing philosophical views concerning the mode of existence of mathematical magnitudes, on which cf. pp. 29-32 and 44-46 *supra*. It would have been pertinent to ask, however, how can the moving force of the celestial sphere inhere in poles which are points without magnitude, i.e. in non-physical entities which according to Speusippus cannot be alive (cf. Aristotle, *Metaphysics* 1028 B 21-24 = F 29a with comm. *ad loc.*).

F 63a

Context. Aristotle explains the unity of substance and definition by his doctrine that the genus is the abstracted material element of the species, the genus existing only as informed by the ultimate differentiae, a notion that causes him to regard all the intermediate differentiae as superfluous (cf. on F 67 and pp. 67-70 *supra*). Nevertheless, when in ch. 13 of the second book of the *Posterior Analytics* he comes to discuss how definitions are established, he maintains that it is necessary to give all the essential differentiae of the definiendum and defends the usefulness of diaeresis for this very purpose (cf. esp. *Anal. Post.* 96 A 25-97 A 6). According to Aristotle, the conditions for establishing a definition through division are three: (i) the admission of essential elements only; (ii) the arrangement of them in the correct order; which order, since it goes from the more to the less general, will show the course of the actualization of the genus; (iii) the omission of no essential element. The first step is made possible by the establishment of the genus through the topic of the genus (cf. also *Topics* IV). The second and the third steps depend upon the correct application of the method of dichotomic diaeresis once the genus has been established by col-

lection; for in these last two steps we must make sure to give all the differentiae in the right order and to omit none.

Aristotle defends such a use of diaeresis against two possible objections. He first argues that, though the method of diaeresis seems to take everything for granted at the start, it makes a difference which attribute is taken before another, and he adds that division is the only safeguard against omitting any essential difference (96 B 27-97 A 6). Aristotle then maintains that the person who defines and divides need not know *all* things, and he defends this contention (97 A 11-22) against a theory (97 A 6-11) which asserts precisely this, that it is impossible to define without knowledge of all things. All the extant ancient Greek commentators attribute the doctrine described in 97 A 7-11 to Speusippus (cf. F 63b-e), and the anonymous commentator (F 63b) cites Eudemus as his authority for this ascription.

1-14. Aristotle ascribes to Speusippus three contentions in support of his doctrine that definition requires knowledge of all things: (a) it is impossible to know the differentiae of each thing in respect to every other thing unless one knows each thing; (b) but one cannot know each thing unless one knows the differentiae (sc. that make it different from everything else); (c) for a thing is identical with that from which it does not differ, whereas it is different from that with which it differs. Steps (a) and (b), if taken by themselves, might imply that Speusippus denied the possibility of definition, since the reciprocal requirements that one cannot know each thing without knowing its differentiae from every other thing and that one cannot know the differentiae without knowing each thing, are either a vicious circle or require from the start the assumption of knowledge of everything, and so also of all the differentiae. The latter possibility, however, cannot be ascribed to Speusippus, for he postulated direct knowledge of numbers only (cf. pp. 21-23 *supra*). Philoponus (F 63d) and Eustratius (F 63e), however, think that Speusippus did indeed deny the possibility of definition. But, even apart from our evidence that Speusippus both classified and defined,²⁰³ and from the fact that Aristotle considered him to be a definition-monger,²⁰⁴ such an interpretation of the doctrine of 97 A 6-11 is impossible for the reasons that follow.

²⁰³ Cf. esp. F 6-27, F 65, F 66a-b, F 67, F 68a-c with the respective comm.

²⁰⁴ Cf. on F 65 *infra*.

Aristotle attacks Speusippus with two arguments. First, not every differentia precludes identity, for things which are specifically the same may have different accidental attributes. Second, a rigid division which exhausts the genus and excludes a middle at every step, and the verification that the subject defined is present in one of the opposites will yield a definition of the atomic species regardless of all the other things of which the differentiae are also predicated. These two arguments seem to imply not that Aristotle thought Speusippus denied the possibility of definition, something he would hardly have failed to mention here, but merely that the conditions Speusippus thought necessary for definition are unnecessary and due to misunderstanding both of the use of diaeresis for the establishment of definitions and of the unity of substance and definition. He may also have thought, though he does not say so, that Speusippus' conditions for definition are exorbitant and impossible to fulfill.

The clue to reconstruct Speusippus' doctrine is contained in step (c) above. For the words οὐ γὰρ μὴ διαφέρει, ταὐτὸν εἶναι τούτῳ, οὐ δὲ διαφέρει, ἕτερον τούτου show that Speusippus used the dichotomic principle πότερον ταὐτὸν ἢ ἕτερον for the establishment of the differentiae which he considered essential for the definition of everything. This principle, as well as that of ὁμοιότης (which he also used for the purpose of classification and definition), Speusippus derived from the direct knowledge of numbers he postulated. And these two principles, together with the role he ascribed to sense-perception (cf. F 75-76), would have enabled him to construe, by means of dichotomic division, a "map" of all reality in which the differentiae of each thing to every other thing were specified. How successful Speusippus was in this enterprise and whether the task he set for himself is possible or not is a different matter; but there is evidence that this is what he tried to do (cf. pp. 53-70 *supra*). It is clear then that, as Aristotle implies, Speusippus disregarded the difference between essential and accidental attributes and that he thought that all the differentiae are necessary to obtain the definition of a given entity. If we now consider the steps designated above as (a) and (b)—to know the differentiae of each thing from every other thing one must know each thing and, conversely, to know each thing one must know the differentiae—, we must infer that Speusippus must have thought that any entity (except the separately existing numbers, magnitudes, and perhaps also the soul [cf. pp.

53-61 *supra*]) is just the focus of all the relations of similarity, identity, and difference with respect to every other thing and to the whole. And Aristotle himself elsewhere provides evidence that this was indeed Speusippus' doctrine (cf. F 66a-b with the respective comm.). In short, then, Speusippus' conception that definition requires knowledge of all things depends upon his metaphysical and epistemological doctrines.²⁰⁵

F 63b

The anonymous commentary, which according to Wallies (*CAG*, XIII, 3, p. v and n. 4) is older than Philoponus' and probably drew on Alexander's, correctly interprets Speusippus' doctrine (cf. also note 205). And, since in it Eudemus is cited as the authority for referring *Anal. Post.* 97 A 6-11 to Speusippus, it is possible that also the correct interpretation of that passage goes ultimately back to him. (On the relation of the anonymous to Alexander's lost commentary on the *Posterior Analytics*, cf. now P. Moraux, *Le commentaire d'Alexandre d'Aphrodise aux "Seconds analytiques" d'Aristote*, [Berlin/New York, 1979], pp. 131-146.)

F 63c-e

Lang, p. 64 refers to, but does not quote, the passage of Themistius (F 63c), apparently because Themistius merely added Speusippus' name to his paraphrase of Aristotle's text. It is noteworthy, however, that Themistius at least does not misinterpret 97 A 6-11 as Philoponus and Eustratius do (cf. on F 63a). I have consequently cited enough of the two last mentioned commentators' text to show

²⁰⁵ It is in part because they do not relate F 63a to the rest of his doctrine that the reconstructions of Speusippus' argument given by Ross, *Aristotle's Analytics*, pp. 659-660 and by Barnes, *Aristotle's Posterior Analytics*, pp. 235-236 are unsatisfactory. Stenzel, col. 1650, 46-51, Isnardi Parente², pp. 1056-1057 with n. 82, and Guthrie, *History*, V, p. 465 wrongly think that all the ancient commentators on *Anal. Post.* 97 A 6-11 have taken this passage to mean that Speusippus really denied the possibility of definition (cf. on F 62b). Zeller, II, i, p. 996 and n. 2 saw that such an interpretation is incompatible with other evidence we have about Speusippus but did not explain the meaning of the Aristotelian text at all. Cherniss, I, pp. 59-63 interprets the passage correctly as does Stenzel, too. Guthrie seems to favor Philoponus' and Eustratius' interpretation, while Isnardi Parente is rather vague, though she may have the right notion about the implications of the passage.

that they wrongly thought Speusippus denied the possibility of definition, but I have omitted their refutation of his argument as so misinterpreted.

F 64

In ch. 5 of the first book of the *Topics* Aristotle undertakes to explain what he means by definition (ὅρος), property (ἴδιον), genus (γένος), and accident (συμβεβηκός). Definition (cf. 101 B 38-102 A 17) is a *phrase* signifying a thing's essence (ἔστι δ' ὅρος μὲν λόγος ὃ τὸ τί ἦν εἶναι σημαίνων); it cannot be merely a name. One may, however, consider to be "definitory" (ὀριστικός), or akin to definition, such statements as "the 'becoming' is beautiful." And similarly also "Are sensation and knowledge the same or different things?" Concerning definitions also, much of the discussion turns upon the question πότερον ταῦτὸν ἢ ἕτερον. Thereafter Aristotle explains the usefulness of πότερον ταῦτὸν ἢ ἕτερον in the overthrow of definitions, and the *Topics* provides ample illustration of this use. Now the question whether sensation and knowledge are the same or different things immediately reminds us of Plato's *Theaetetus* (151 D-186 E); and many of Socrates' refutations of definitions in Plato's aporetic dialogues are also based on the principle πότερον ταῦτὸν ἢ ἕτερον. Nevertheless, the importance of this principle in Speusippus' system and its connection with the subject of division and definition, which Aristotle himself mentions in *Anal. Post.* 97 A 10-11 (= F 63a; cf. also on F 67 and on F 68a-c); and the presence of several Speusippean doctrines in the first book of the *Topics*, particularly in connection with definition (cf. Tarán, *Homonymy*, pp. 91 with n. 58, and 92-97) make it probable that Aristotle has Speusippus especially in mind here when he says καὶ γὰρ περὶ τοὺς ὀρισμοὺς πότερον ταῦτὸν ἢ ἕτερον ἢ πλείστη γίνεται διατριβή. (Lang, p. 24, n. 1 and others have referred to this passage of the *Topics* in connection with Speusippus.)

F 65

Context. In ch. 18 of the first book of the *Topics* Aristotle examines the usefulness to the dialectician of the three subjects he had discussed in the three previous chapters: the investigation of ambiguity (ch. 15), the discovery of differentiae (ch. 16), and the investigation of similarity (ch. 17). The first is discussed in 108 A

18-37, the second in 108 A 38-B 6, the third in 108 B 7-31. The usefulness of the knowledge of similarity (ἡ τοῦ ὁμοίου θεωρία) is to be seen (a) in inductive arguments, (b) in hypothetical reasonings, and (c) in the production of definitions. (a) is explained in 108 B 9-12, (b) in 108 B 12-19, (c) in 108 B 19-31. We are concerned with (c), for it is here that Aristotle refers to Speusippus, though he does not name him (cf. the following note). The knowledge of similarity is useful in the production of definitions because, enabling us to see the identical element in each species,²⁰⁶ it facilitates the discovery of the genus; for of the common predicates the genus is that which is most in the category of substance (108 B 19-23). Similarly in the case of widely different things (108 B 23-31 = F 65). Concerning the presence of Speusippean doctrines in chs. 15-18 of the *Topics* and the probable influence of Speusippus on Aristotle in this connection cf. pp. 72-77 *supra*.

1-8. Aristotle here maintains that ἡ τοῦ ὁμοίου θεωρία is useful for rendering definitions in the case of widely different things (ἐν τοῖς πολὺ διεστῶσι), i.e. of things which in Aristotle's view, as we shall see, do not fall under the same genus. For the knowledge of similarity enables us to see the identical element in such things. The first example he gives is that calm at sea is the same as windlessness in air, since each of them is a form of rest (ἡσυχία). The second is that a point in a line is the same as a monad in number because point and monad are ἀρχαί. (On the "proportional similarity" implied here cf. *Topics* 108 A 7-12.) And so, says Aristotle, by positing what is common in all (such) cases as genus, we shall seem to be defining not inappropriately. The definition-mongers (οἱ ὀριζόμενοι) do in fact frequently render definitions in this way; for they say that the monad is the ἀρχή of number and the point that of magnitude. It is therefore clear that they place them in what is common to both of them as their genus.

Now the φασίν, which indicates that Aristotle is referring to a doctrine some thinkers actually held, and the fact that the conceptions of the monad as the ἀρχή of number, of the point as that of magnitude, and of the relation of similarity between these two

²⁰⁶ ἐκάστω in 108 B 20 in all probability refers to species, not to individuals, cf. Brunschwig, *Aristote, Topiques*, I, p. 137, n. 2 (on p. 32) and add *Topics* 102 A 31-B 3.

ἀρχαί are doctrines of Speusippus (cf. F 51 with comm. *ad loc.* and also on F 38, line 1), show that by the οἱ δρίζόμενοι who make such use of ἡ τοῦ ὁμοίου θεωρία Aristotle intended to refer to him. In other passages Aristotle refers to Speusippus' ἀρχή of number as τὸ ἕν (cf., however, *Metaphysics* 1092 A 29 with introductory note on F 38 and note 127), but it is even possible that Speusippus himself used μονάς and τὸ ἕν as equivalent expressions (cf. p. 36 *supra*). This passage, then, provides evidence of Speusippus' use of the principle of ὁμοιότης for the purpose of establishing definitions (cf. further pp. 60-63 *supra*).

Though he himself uses the principle of ὁμοιότης (cf. the introductory note to this fragment), and though he makes it the basis of the argument from analogy (cf. Cherniss, I, n. 48), it is clear even from the present passage that Aristotle expresses only qualified approval of the use to which Speusippus puts the principle of similarity. For one thing the words δόξομεν οὐκ ἄλλοτρίως ὀρίζεσθαι seem to imply some reservation. And when Aristotle contends that what the definition-mongers do is to place such things as monad and point εἰς τὸ κοινὸν ἀμφοτέρων γένος, it becomes clear that he is already implicitly criticizing Speusippus. (On κοινόν in Speusippus cf. p. 62 *supra*.) For from Aristotle's point of view monad and point do *not* belong to the same genus (cf. *Anal. Post.* 88 A 30-34 ἐκ δὲ τῶν κειμένων ὧδε· οὐδὲ γὰρ τῶν ἀληθῶν αἱ αὐταὶ ἀρχαὶ πάντων. ἔτεραι γὰρ πολλῶν τῷ γένει αἱ ἀρχαί, καὶ οὐδ' ἐφαρμόττουσαι, οἷον αἱ μονάδες ταῖς στιγμαῖς οὐκ ἐφαρμόττουσιν· αἱ μὲν γὰρ οὐκ ἔχουσι θέσιν, αἱ δὲ ἔχουσιν. Cf. also on F 66a-b and on F 71). Moreover, since the first example he gave, that of γαλήνη ἐν θαλάσσῃ and νηνεμία ἐν ἀέρι, had already been cited in 108 A 11-12 as one among things which are ἐν ἑτέροις γένεσιν (108 A 7-8), we must infer that the same is true concerning monad in number and point in magnitude. One may say, however, that for Speusippus γένος and εἶδος do not carry the same connotations as they do in Aristotle (cf. pp. 61 ff. *supra*).

Topics 108 B 23-31 was not cited by Lang in any part of his edition, but the passage has been referred to in connection with Speusippus by Stenzel, cols. 1644, 1664, Cherniss, I, n. 82, and others.

F 66a-b

In *Metaphysics* H.3, 1043 B 32-1044 A 14 Aristotle discusses the analogy between the unity of definition and that of number, the

whole section being probably directed only against the Platonists.²⁰⁷ For Aristotle the unity of definition is explained by the fact that it is the formula that expresses the unity of substance. According to him the Platonists fail to account for the unity of definition just as (or perhaps precisely because) they fail to account for the unity of numbers, which for them are the substances of things (cf. 1043 B 33-34 εἴπερ εἰσὶ πῶς ἀριθμοὶ αἱ οὐσίαι, οὕτως εἰσὶ καὶ οὐχ ὥς τινες λέγουσι μονάδων). For like definition number is a unity of indivisibles. Either each number is a unity or it is not a unity but some kind of heap (σῶρος); in either case it is necessary to state—as the Platonists do not—what it is that makes number a unity out of many units (1043 B 36-1044 A 5). Similarly, the Platonists fail to account for the unity of definition because they cannot account for the unity of substance. For each substance is a unit because it is an actual entity (ἐντελέχεια καὶ φύσις τις ἐκάστη), and not, as some say, because it is a sort of monad or point (οἷον μονάς τις οὐσα ἢ στιγμή). Now ὥς λέγουσί τινες shows that Aristotle is referring to a doctrine actually held; and, since μονάς τις and στιγμή are here synonymous expressions, as a point is a monad with position (cf. *De Anima* 409 A 6 ἡ γὰρ στιγμή μονάς ἐστι θέσιν ἔχουσα; *Metaphysics* 1084 B 26-27 ἡ γὰρ μονάς στιγμή ἄθετός ἐστιν; cf. 1016 B 23-26, etc.), it follows that in 1044 A 5-9 (= F 66a) Aristotle is referring to Speusippus' doctrine. For it is only to him that he ascribes the substantiality of the point (cf. on F 50, F 51, F 52, and note 202 *supra*). We may infer, then, that Speusippus thought that any entity is similar to a point. (On the relation of similarity between point and unit, and between numbers and magnitudes cf. the last paragraph in the comm. on F 28, lines 33-36, and F 65 with comm. *ad loc.*) This is in agreement with his identification of an entity with the sum total of its relations of similarity, identity, and difference in respect to every other thing and to the whole (cf. F 63a with comm. *ad loc.*). An entity is the focus of all such relations and its definition would be rendered by the λόγος enumerating all such

²⁰⁷ *Pace* Ross, note on 1043 B 34, and others, I do not believe that Aristotle has here in mind the Pythagoreans as well as the Platonists. It is clear that Aristotle is here thinking of those who believe in abstract, not in concrete numbers. Ross' reference to *Metaphysics* M.6-7 is not to the point. Even there the Pythagoreans are introduced merely for the purpose of enabling Aristotle to present his view of numbers (potentially existing in things and capable of actualization in thought) as a "middle" view between those of the Platonists and the Pythagoreans (cf. the introductory note to F 32).

relations. This doctrine is anathema to Aristotle, for whom the unity of definition is the statement of the essential unity of matter and form in the definiendum.

It is then intelligible that when in H.6 Aristotle returns to the question of the unity of definition and of number (1045 A 7 ff.) he again attacks Speusippus' conception of the unity of definition. For a definition is a λόγος which is one not because the words or formulas are bound together as the *Iliad* is, but because it is the λόγος of one substance. The reference to the *Iliad* makes it possible to consider that Aristotle is here thinking of the loose unity of the epic with its plot made up of many episodes in contraposition to the more "essential" unity of the plot of tragedy (cf. esp. *Poetics* 1462 B 3-15). Aristotle attacks elsewhere the Speusippean universe of many οὐσίαι and many ἀρχαί with the contention that it makes of nature a series of disconnected episodes like a bad tragedy (cf. *Metaphysics* 1090 B 19-20 = F 37, 1076 A 1 = F 30, and note 122). In F 66a-b the emphasis is on the lack of internal unity of each substance (cf. also on F 67 *infra*), which results in Speusippus' failure to account for the unity of definition and the consequent disregard of the difference between essential and non-essential attributes.²⁰⁸ On these criticisms and on Speusippus' conception of diaeresis and definition cf. pp. 58-70 *supra*.

F 67

In what follows I give first my own interpretation of Aristotle's arguments and then the grounds for believing that Speusippus is the butt of Aristotle's objections to the use of dichotomic diaeresis for classification. (The question of the validity of Aristotle's arguments is discussed in pp. 64-70 *supra*.)

In the first part of this commentary, so as not to prejudge the issue, I shall refer to the butt of Aristotle's attack by "the dichotomists" or similar expressions. Two more things should be taken into consideration: first, that the notion that the species is the final differentia in the matter, though mentioned for the first time in 643 A 24-27 = lines 47-49, is presupposed throughout this passage; second, that Aristotle here takes for granted his own view of dichotomic diaeresis as put forward in some of his other works,

²⁰⁸ On the probability that in F 66a-b Aristotle is referring to Speusippus, cf. Cherniss, I, p. 58 and *Riddle*, p. 38 with n. 38.

especially in *Metaphysics* Z-H. And so, whereas in some passages Aristotle criticizes the *actual* procedure of the dichotomists, in others he enunciates his own rules for dichotomy in order to show that dichotomic division is useless for classification. For this purpose he recommends instead a non-dichotomic diaeresis which immediately divides the genus by multiple coordinate differentiae.

The steps of the argument are the following:

I) 642 B 5-9 = lines 1-5. Some people try to reach the species by dividing the genus into two differentiae. This is impossible,²⁰⁹ however, because of some things there will be only one differentia,²¹⁰ the others being superfluous. For example, in "footed," "two-footed," "cleft-footed," only the last term is the real differentia. To mention also the others would amount to saying the same thing many times. This objection is developed in 643 B 28-644 A 11 (cf. under VIII *infra*). But even here one must say that Aristotle's point is not merely that one should avoid unnecessary repetition. ἔσται is a *futurum consequentiae*. It indicates that the necessary result of dichotomy is to provide at most only one differentia; and the implication is that by dichotomic diaeresis no natural species can be reached because every such species is characterized by multiple differentiae (cf. 643 B 12-13 and 15-17) which are *not* the antecedents of the single final differentia.

II) 642 B 10-20 = lines 6-14. Dichotomic diaeresis cannot avoid disrupting homogeneous classes. Thus in "the written divisions" the class "bird" is disrupted in that some birds are classified with the "water animals," others with the "land animals." Aristotle objects to the dichotomy land animals-water animals and implies

²⁰⁹ In 642 B 6-7 τῇ μὲν οὐ ῥάδιον τῇ δὲ ἀδύνατον is an understatement for "impossible," since it is Aristotle's point that no species can be reached by dichotomy (cf. 643 B 12-13 and 15-17 with 643 B 28-644 A 11). Cf. 644 B 19-20 καὶ διότι τὸ διχοτομεῖν τῇ μὲν ἀδύνατον τῇ δὲ κενόν, εἴρηται; *Metaphysics* 1085 A 28-29 οὐ ῥάδιον λῦσαι, εἰ μὴ ῥάδιον δεῖ λέγειν τὸ ἀδύνατον. Similarly in 642 B 34-35 πάντων δὲ χαλεπώτατον ἢ ἀδύνατον = "it is impossible," cf. *Cat.* 8 A 29-30 ἢ τῶν πάντων χαλεπῶν ἢ τῶν ἀδυνάτων with Waitz, *Aristotelis Organon*, I, p. 301 *ad loc.*

²¹⁰ The point of ἐνίων (642 B 7) is not that in some cases there will be more than one differentia but that there will be either one or none at all. The latter is the case with privative terms because they cannot furnish differentiae (cf. 642 B 21-643 A 27 and under section III *infra* in the text).

that natural habitat should not be a *fundamentum divisionis*. The dichotomists have been misled by the fact that one similarity has received the name bird, the other the name fish. Similarly, the class "multipeds" would also be disrupted by dividing it into land animals and water animals. On the other hand, other similarities like "sanguineous" and "bloodless" have not received a common name. The implication of this criticism, given the fact that *ἐναιμιον* and *ἄναιμιον* play an important rôle in Aristotle's zoology, is that in "the written divisions" these similarities were disregarded, and so the classes "sanguineous" and "bloodless" were also disrupted.

III) 642 B 21-643 A 27 = lines 15-49. The main point of this whole argument is that dichotomic diaeresis cannot avoid using privative terms (*στερήσεις*) and that privative terms are useless for classification. (In what follows I use "privative terms" as a translation of *στερήσεις*. I avoid "privative differentiae" because Aristotle's point is that in dichotomy a merely privative differentia is useless for classification, since it cannot provide a true differentia.) For a private term cannot be divided, since it indicates only what a thing is not. Yet to classify one needs both generic differentiae (i.e. differentiae common to several classes) and specific ones (i.e. each of which characterizes one species only). Privative terms, however, can be neither. Nor can a privative term be a final differentia. Aristotle does not mean to say that dichotomy uses only privative terms but that in some cases it cannot avoid using them, and he is here (i.e. in 642 B 21-643 A 27) concerned with this last possibility.

After the opening statement that dichotomy must use privative terms and that the dichotomists do in fact use them, the argument falls into two parts: (a) 642 B 22-643 A 7 and (b) 643 A 7-27; in each case there is a further subdivision. (a, i) = 642 B 22-30 = lines 16-23. A privative term cannot be a generic differentia because it has no *εἶδη*, as a generic differentia must have. (a, ii) = 642 B 30-643 A 7 = lines 23-33. A privative term cannot be a specific differentia. Even when the differentiae can be subdivided, it is difficult to classify in such a way that each animal is under one subdivision and under no more than one. For example, if we divide into "feathered" and "unfeathered," we find that some animals like the ant fall under both divisions. But it is impossible (cf. note 209) to

classify by dividing into contradictory opposites.²¹¹ For it is necessary that each specific differentia belong to one species only, and so also the opposite differentia (i.e. opposite to the positive one) must belong to one species only. But this is impossible in the case of a privative term. For a single and indivisible essential form (i.e. a differentia which is of the essence of an entity) cannot belong to things which are specifically different; when it does, there will always be a further difference. (In the parenthesis Aristotle explains what he means. The examples he gives are of positive differentiae that require further differentiation, and his point is that a privative term requires further differentiation, but *qua* privative it cannot be divided. For example, bird and man are both "two-footed;" hence "two-footed" cannot be the same in man and in bird. Similarly, even "sanguineous" must be different in man and in bird; otherwise "having blood" cannot be of the essence of each, as it clearly is for Aristotle. If this is so, i.e. if the identical term which designates an essential differentia of two species is different in each case, the single differentia will belong to two different species.) This being the case, it is clearly impossible for a privative term to be a specific differentia. Why does Aristotle take it for granted that a privative term cannot belong to one species only? Because, if one divides a genus into A and not-A, it is impossible, in the case of animals, that under the mere negation of A fall one species only. And, since the privative term will belong to two or more classes and *qua* privative has no further difference, it would be neither an essential element of any species nor a differentia at all.

In dichotomy privative terms can be neither generic nor specific differentiae. Aristotle next tries to show (= *b*) that they cannot be final differentiae either. (*b*, i) = 643 A 7-16 = lines 33-40. If both the species and the differentiae are indivisible, and no difference is common (sc. to two or more species), then the number of differentiae will be equal to that of the infimae species. For, if it is possible for a differentia not to belong (sc. only to one infima species) and to be common but indivisible (as a private term must be), it is clear that

²¹¹ In 643 B 35 ἀναιμα, the reading of the MSS, cannot be right since it would spoil Aristotle's argument, which is general. Both ἀντικείμενα (Titze) and ἐναντία (Ogle) are possible emendations. I prefer the former because it is part of Aristotle's point that in dichotomic division, where one must divide εἰς τὰ ἀντικείμενα (cf. 643 A 31-32 = V *infra*), it is sometimes impossible to avoid the use of private terms. This is precisely what Aristotle has in mind here.

animals specifically different would fall under the same division in so far as the differentia is common. The implication is that this is impossible because a common difference must be divisible, but a privative term *qua* privative cannot be divided. Therefore, if the differentiae under which all infimae species are arranged are individual characters, none of them can be common; otherwise, different species would fall under the same division, and this would make classification impossible. There follow three rules which no classification can violate: it is necessary that one and the same infima species not fall under more than one final differentia, that different species not fall under the same final differentia, and that every species fall under one of the final differentiae. (b, ii) = 643 A 16-27 = lines 40-49. It is clear, then, that by dichotomy one cannot reach the infimae species of animals or of any other kind of entity.²¹² For even according to the dichotomists it is necessary that the number of final differentiae be the same as that of all the infimae species of animals. Take for example a genus the first differentiae of which are "the whites."²¹³ Of each of these there are other differentiae, and so on until one reaches the indivisible differentiae. (For the sake of the argument Aristotle grants here that the generic differentiae represented by privative terms can be divided.) Now the final differentiae will be four or another number obtained by doubling each of the differentiae (e.g. $2 \rightarrow 4 \rightarrow 8 \rightarrow 16$, etc.).²¹⁴ The number of species will be as many as the number of final differentiae. But the species is the differentia in the matter,²¹⁵ for the species cannot exist without the matter, nor can it be matter alone. The implied objection is not that the number of species does

²¹² This generalization of Aristotle's argument against the use of dichotomy for natural classification (643 A 17-18) to include all kinds of classes applies to the whole argument, with the exception of those objections which can only refer to living beings, e.g. 643 A 35-B 8.

²¹³ Perhaps there is no need to postulate a lacuna after τὰ λευκά in 643 A 20-21. The expression is unusual, but Aristotle clearly means to say that we take a genus and divide it into "white" and "not white."

²¹⁴ Aristotle's language in 643 A 21-23 shows that this is the only possible interpretation, since he says that in each step each of the sub-classes is further divided into two.

²¹⁵ In 643 A 24 ἔστι δ' ἡ διαφορὰ τὸ εἶδος ἐν τῇ ὅλῃ, the reading of all the MSS except Y and Δ (if this is truly an independent witness), must be accepted. But τὸ εἶδος, not ἡ διαφορὰ must be the subject (the word order cannot be decisive in this case) because it is Aristotelian doctrine that "the species is the differentia in the matter," whereas "the differentia is the species in the matter" is unsatisfactory.

not coincide with the number of final differentiae, nor yet that it is impossible to divide privative terms, but that a negative term cannot be a final differentia because a privative term plus matter cannot be a species. Hence, it is impossible to reach the infimae species by dichotomic division.

IV) 643 A 27-31 = lines 50-53. Aristotle here formulates a fundamental rule of dichotomic diaeresis from the point of view of his own conception of this method: it is necessary to divide by essential elements and not by necessary but accidental properties. For example, one should not divide the plane rectilinear figures into those in which the sum of the interior angles is equal to two right angles and those the sum of whose interior angles is greater than that. For it is a necessary but accidental property of a triangle that the sum of its interior angles is equal to two right angles, since this property is merely the necessary consequence of the fact that the triangle is a rectilinear plane figure bounded by three sides. In short, then, by implication Aristotle here accuses the dichotomists of disregarding the difference between essential and accidental properties.

V) 643 A 31-35 = lines 54-57. In this case, too, Aristotle formulates a rule of dichotomic diaeresis according to his own doctrine: it is necessary to divide by true opposites because it is opposites that are differentiated from each other, for example "white" and "black," "straight" and "curve." Therefore, if one of the opposites is differentiated, one must also differentiate the other, and not divide one by "swimming" and the other by a color. The implication is that the dichotomists wrongly introduce new principles of division into a given dichotomy, and so they include essential and accidental characteristics in a single division (cf. 643 B 17-23 and under VII *infra*).

VI) 643 A 35-B 8 = lines 58-65. In addition, in the case of living beings one must not divide by the common functions of body or soul.²¹⁶ To do so amounts to disrupting homogeneous classes. This

²¹⁶ The expression τὰ γ' ἐμψυχα τοῖς κοινοῖς ἐργοῖς τοῦ σώματος καὶ τῆς ψυχῆς (643 A 35-36) cannot mean, as many interpreters believe, "the functions common to body and soul" = psychosomatic functions. Even the attributive position of κοινοῖς suggests that Aristotle is objecting to the

is what happens in the divisions mentioned above (cf. 642 B 12) with the dichotomy "walking"-"flying," for there are some classes, e.g. the ant, which both walk and fly. Also by "wild" and "tame" are living beings divided (sc. in "the written divisions"); but in this way one would divide species which are one and the same. On the last objection cf. *infra* the second part of this note.

VII) 643 B 9-26 = lines 66-80. This disruption of natural classes in dichotomic diaeresis is the necessary result of using a single principle of division. Aristotle proceeds then to give rules for the use of non-dichotomic diaeresis in natural classification. It is necessary to begin by distinguishing between the natural kinds, such as "bird" and "fish," as the many do. (Later one may admit also natural classes which have not been properly recognized, e.g. "sanguineous" and "bloodless," cf. 642 B 15-16 and under II *supra*.) Each of these, however, is characterized by multiple differentiae, which is not the case in dichotomic diaeresis. And so by dividing into two either one fails to reach the species at all (for the same species falls under several divisions or contraries fall under the same division), or one ends with a single differentia only, and this differentia, whether single or composite, will have to be the final specific form (which is impossible, cf. 643 B 28-644 A 11). The dichotomists try to avoid this absurd consequence by attempting to provide more than a single differentia; but, in the course of doing so, they violate a fundamental rule of dichotomic division. For, if one does not take the differentia of the previous differentia, the continuity of the division is as artificial as are the definitions whose unity is due merely to conjunction. Aristotle says that he has in mind the procedure of the dichotomists when they divide into "unfeathered" and "feathered" and then proceed to divide the latter into "tame" and "wild" or into "white" and "black." For neither "tame" nor "white" is a differentia of "feathered," but

dichotomists for using dichotomies based on functions of body or soul which are common to many different kinds of living beings. His point is that in such dichotomies the same species may fall under two opposite divisions or that one divides homogeneous classes. Moreover, 643 A 35-36 corresponds to the method τὰ κοινῇ συμβεβηκότα πᾶσι κατὰ τι κοινὸν ὑποθεμένους (639 A 18-19) that Aristotle rejects in 639 A 12-29. In short, Aristotle is objecting to the dichotomists' use of bodily or psychical functions common to living beings because they disrupt natural classes. On the other hand, there is no point here in objecting to the use of psychosomatic functions as such.

they belong to it only accidentally. Hence, it is necessary, as was said above, immediately to divide the genus by multiple (coordinate) differentiae. In that case also privative terms will provide differentiae, as they cannot do in dichotomy.

VIII) 643 B 26-644 A 11 = lines 81-98. Aristotle now develops the objection he first enunciated in 642 B 7-9 (cf. under I *supra*), and to which reference was made in 643 B 15-17 (cf. under VII *supra*). It is clear that by means of dichotomic division it is impossible to reach the infimae species. For no infima species can be characterized by a single differentia, whether simple or composite. Simple is a differentia that has no further differentiae; composite is the final differentia together with its antecedent differentiae. To begin with, the continuity of the differentiae that in dichotomic division proceed from the genus is this: that the whole is a unit. Secondly, from the form of the expression itself it appears that there is the final differentia only and that the antecedent differentiae are superfluous, since they are included in the final differentia. And so it is clear that in dichotomy there cannot be multiple final differentiae. One reaches the last differentia, but not the ultimate differentia and the species. And in dichotomy this last differentia, if one divides off man, is either "cleft-footed" or the whole series "footed," "biped," "cleft-footed." Now if man were only "cleft-footed," this would be his single differentia; but, since he is not, there must be multiple final differentiae. A single dichotomy, however, can reach only one differentia for each species and cannot include several at the same time. And so it is impossible to reach any infimae species of animals by the use of dichotomic diaeresis.

It is clear that *De Partibus Animalium* I.2-3 is a unified argument against the use of dichotomy for natural classification. Twice Aristotle refers to a work or works which he calls αἱ γεγραμμένα διαρῆσεις. Some scholars think that the reference is to Plato's *Sophist* and *Politicus*; others that the reference is to a collection of Platonic divisions; still others that Aristotle refers to tables which were the common property of the Academy; and it has also been suggested that Aristotle refers to both Plato and Speusippus. Yet Plato cannot at all be the butt of Aristotle's attack (cf. Cherniss, I, p. 55). To begin with, Aristotle is referring to an *exhaustive* classification of animals, but neither the *Sophist* nor the *Politicus* offers

an exhaustive classification. Secondly, in the *Sophist* (223 C, 225 C, 229 B, 230 D) it is said that dichotomous divisions cannot provide an exhaustive classification. Thirdly, in the *Politicus* (287 B-C, 289 A-B, 289 E-291 C, 291 D-E) Plato abandons the use of dichotomy for classification because it is often impossible; in these cases it must be replaced by a *natural* classification which does not disrupt homogeneous classes (cf. also *Phaedrus* 265 E, *Philebus* 16 D). Fourthly, Aristotle's objection to the use of merely privative terms for classification is also made by Plato (*Politicus* 262 A-263 B). Finally, the dichotomy land animals-water animals that Aristotle criticizes in 642 B 10-20 = lines 6-14 is not to be found in Plato's dialogues. *Sophist* 220 A-B and *Laws* 823 B contain the trichotomy water animals-land animals-air animals. To these three the *Timaeus* (39 E-40 A; 91 D-92 B) adds a fourth class, the heavenly bodies, which the respective contexts in the *Sophist* and the *Laws* do not require Plato to mention (cf. Tarán, *Academica*, p. 46 and n. 207). Aristotle cannot be referring, either, to Platonic divisions now embodied in the *Divisiones Aristoteleae* because in this last work trichotomy is the most frequently used method of division (cf. Cherniss, I, p. 56 and n. 44). Nor is it at all probable that Aristotle has in mind tables which were the common property of the Academy, since the expression αἱ γεγραμμέναι διαιρέσεις shows that he is referring to a published work or works which contained an exhaustive classification of natural classes. Now we know that in the second book of his work *On Similar Things* (cf. T 1, line 54 and F 6-27) Speusippus offered a classification of plants and animals, and that his Διαιρέσεις καὶ πρὸς τὰ ὅμοια ὑποθέσεις (T 1, line 55; cf. further p. 66 *supra*) was related to the former work. In a fragment of the *Ὅμοια* we find evidence of dichotomous division (cf. F 8 with comm. *ad loc.*). And it follows from F 63a-b that Speusippus' conception of definition presupposes an exhaustive classification made by means of the *dichotomic* principle πότερον ταῦτ' ἢ ἕτερον (cf. on F 63a; see also F 68a-b with comm. *ad loc.*).²¹⁷ It is therefore quite probable that the butt of Aristotle's arguments in F 67 is Speusippus, and the following additional evidence further supports this interpretation.

²¹⁷ This is a sufficient refutation of Guthrie, *History*, V, p. 464 and n. 5, who contends there is no evidence that Speusippus used dichotomy for the purpose of classification. Against Guthrie's misunderstanding of F 68a cf. on F 68a-c.

In 642 B 10-20 Aristotle's criticism implies that natural habitat cannot be used as a *fundamentum divisionis* because one would thereby disrupt homogeneous classes (cf. under II *supra*). A fragment of the "Ὅμοια (F 6) provides evidence of the use of natural habitat in Speusippus' classification. In that same passage Aristotle mentions the "multipeds" as an example of a class disrupted by the dichotomy land animals-water animals, and we have evidence that Speusippus did recognize the class "multipeds" (cf. F 17). 643 A 20-24 shows that in the dichotomic classification Aristotle is attacking both sides of the bifurcation were equally extended (cf. under III *supra* with note 214). This description fits Speusippus' classification which was based on the strict application of the principle πότερον ταῦτὸν ἢ ἕτερον (cf. on F 63a and on F 68a-c). In 643 B 17-23 Aristotle criticizes the dichotomists because they introduce new principles of division into a given dichotomy. In doing so they make the continuity of the division a purely artificial one, since the distinction between essential and accidental attributes is disregarded (cf. also 643 A 27-35). This failure to explain the unity of the species is compared with the artificial unity of the definitions the dichotomists provide, for the unity of these definitions is merely συνδέσµω. Now these two criticisms appear also in *Metaphysics* 1044 A 5-9 and 1045 A 12-14, two passages where in all probability the butt of Aristotle's attack is Speusippus (cf. on 66a-b). Moreover, F 63a-b also provides evidence that Speusippus disregarded the distinction between essential and accidental attributes (cf. *ad loc.*). The importance of the principle of ὁµοιότης in the system criticized by Aristotle (cf. 642 B 10-20 and 643 A 35-B 8) also points to Speusippus, for whom "similarity" is a bond within the classes (F 6-27) and among the classes (cf., with the corresponding parts of the commentary, F 28, lines 8-9, 33-36, 43-60; F 29a; F 51; F 65; F 70-71).

Aristotle's injunction against dividing living beings by the common functions of body or soul, as is the case in the written divisions with "walking"- "flying" and "wild"- "tame" (cf. 643 A 35-B 8; cf. under VI *supra* with note 216) fits Speusippus' method of finding similarities by looking for the common properties of things (cf. F 28, lines 8-9; F 70-71). Moreover, in 643 B 3-8 Aristotle criticizes the use of the dichotomy "wild"- "tame" in the written divisions because it would divide homogeneous classes. The argument he here uses is a *reductio* based on the Speusippean exhaustive division of

the ταῦτόνυμα into *homonyma* and *synonyma* (cf. on F 68a-c). Aristotle contends that to divide by “wild” and “tame” would amount to disrupting identical species, since of just about all animals that are tame there are also wild specimens, e.g. men, horses, etc. Aristotle faces his adversary with the following dilemma: (a) If each of these class names, e.g. “men,” “horses,” etc. is used homonymously, then the class has not been divided into infimae species. From Aristotle’s point of view “wild” and “tame” would have to be specific differentiae. However, if, when we call a class “men,” we mean that the “tame” specimens are *specifically* different from the “wild” specimens, then the class “men” is a class *in name only*, and consequently there is no division into infimae species. (b) On the other hand, if the individual members of each class are *specifically* one, then “wild” and “tame” are not specific differentiae, and so cannot be used as principles of division. In short, Aristotle is facing Speusippus with a dilemma based on the latter’s own exhaustive division *homonyma-synonyma*; and it is significant that, though in the case of *synonyma* only the requisite of synonymy is mentioned but not the term *synonymon*, Aristotle’s own conception of synonymous words is different from Speusippus’ (cf. on F 68a-c, F 69a-b, and pp. 75-76 *supra*).²¹⁸

Krische, *Forschungen*, p. 253, n. 2 saw that “the written divisions” cited by Aristotle refer to Speusippus. Cherniss, I, pp. 56-58, for his part, offered detailed arguments in support of this interpretation. Cf. also Kullmann, *Wissenschaft und Methode*, p. 346 and Tarán, *Homonymy*, pp. 97-99.

F 68a-c

These three texts come from Simplicius’ commentary on Aristotle’s *Categories*.²¹⁹ It is obvious, however, that Simplicius himself did not

²¹⁸ This summarizes the lengthier discussion of 643 B 3-8 in Tarán, *Homonymy*, pp. 97-99, where I have argued against some recent misinterpretations of this passage.

²¹⁹ Some years ago Barnes, *CQ*, N.S. 21 (1971), pp. 65-80 attempted to show that, contrary to the opinion of a majority of scholars, these three texts cannot be used as evidence that Speusippus offered an exhaustive classification of names. In support of his interpretation he contends that in F 68a the words τῶν ὀνομάτων are due to Boethus himself, who wrongly thought that Speusippus’ classification referred to names whereas, according to Barnes, it was concerned with things. Evidence for this he finds in F 68b-c; and so Speusippus’ conception of *homonyma* and *synonyma* would be essentially the same as Aristotle’s in the first chapter of the *Categories*. (Barnes’

have direct access to Speusippus' classification of names. For the first time he cites Speusippus' opinion (F 68b) he introduces it with a parenthetical ὡς φασιν; the second time (F 68c) he cites verbatim a passage of Porphyry's major and now lost commentary on the *Categories*, the Πρὸς Γεδάλειον, and in it Porphyry himself cites Boethus and Speusippus; the third time (F 68a) Simplicius refers to Boethus as his source for Speusippus. It seems moreover that Simplicius did not have direct access to Boethus' commentary on Aristotle's *Categories* but that he got his information about it from Porphyry's Πρὸς Γεδάλειον. For, though sometimes Simplicius cites Boethus independently of Porphyry, the number of times he cites him in connection with the latter, the fact that Simplicius himself says that he follows the Πρὸς Γεδάλειον very closely, and the evidence he provides that Porphyry often cited verbatim and paraphrased Boethus suggest that Simplicius did not have direct access to Boethus' work on the *Categories*.²²⁰ Nevertheless the inferences we can draw about Speusippus' doctrine of names are not seriously affected by the fact that Simplicius knew Boethus indirectly through Porphyry. He probably found the passages of Boethus with which we are here concerned quoted verbatim and/or closely paraphrased by Porphyry; and there is no reason to think that Porphyry misrepresented Boethus. We must also infer that in all

interpretation has been accepted by Krämer, *Platonismus*, p. 343, n. 383 and by Guthrie, *History*, V, pp. 465-466 and 466, n. 1.) In my paper *Homonymy* (= *Hermes* 106 [1978], pp. 73-99) I have offered a detailed refutation of Barnes' arguments as well as of other scholars' scepticism concerning the reliability of F 68a-c. In doing so I referred to the earlier bibliography on this subject and also discussed at length the tradition of the three Greek commentators—the Peripatetic Boethus of Sidon, Porphyry, and Simplicius—to whom we owe our knowledge of Speusippus' classification of names. Consequently, my discussion here has been abbreviated and relies at times on the more extensive discussion given in the paper mentioned above. On the other hand, both in the present part of the commentary and in pp. 72 ff. *supra* I discuss some matters which were not touched upon in *Homonymy*. (The division of names ascribed to Speusippus in *Codex Vindobonensis Phil. Gr.* 314 is in all probability an inaccurate extract made from Simplicius, cf. *Homonymy*, p. 75, n. 7 with references.)

²²⁰ Cf. *Homonymy*, pp. 76-77 with n. 16, where it is also shown that Simplicius probably did not have direct access to Boethus' treatise Περὶ τοῦ πρὸς τι καὶ πρὸς τί πως ἔχοντος (cf. Simplicius, *In Cat.*, p. 163, 6-7), either. In connection with Simplicius' reports on Speusippus' classification of names, it is unnecessary to discuss his indebtedness to Iamblichus' lost commentary on the *Categories*, for there are good grounds for thinking, as we shall see, that for his knowledge of Boethus' reports on Speusippus Simplicius is indebted to Porphyry.

probability Porphyry himself did not have direct access to Speusippus' doctrine of names but that he took his information about it from Boethus. In fact, the only text that explicitly associates Porphyry with Speusippus is F 68c, and here Porphyry himself cites Boethus and Speusippus in such a way as to suggest that for his information on the latter's doctrine of *polyonyma* he is indebted to the former.²²¹ Concerning F 68a-b we must take into account our inference that Simplicius in all probability knew Boethus through Porphyry. And so the likelihood is that when in F 68a Simplicius cites Boethus as his source for Speusippus' classification of names he must have read Boethus' statement in Porphyry. This inference finds confirmation in the fact that Boethus' comment here on Speusippus' notion of *synonyma* is of a piece with what Porphyry reports about Boethus' account of *polyonyma* in F 68c; and this is presumptive evidence that Porphyry knew what Boethus says in F 68a.²²² But even if Simplicius had direct access to Boethus or took F 68a from an intermediate source which is not Porphyry, still we have no evidence that Porphyry had direct access to Speusippus. As for F 68b, which contains the second part of Speusippus' definition of *homonyma*, Simplicius cites it without explicitly naming his source: Σπεύσιππος δέ, ὥς φασιν, ἤρκεῖτο λέγειν "ὁ δὲ λόγος ἕτερος." The word ἤρκεῖτο, however, suggests Porphyry as his immediate source. Thus, when in his extant commentary on the *Categories* Porphyry comments on κατὰ τοῦνομα and τῆς οὐσίας in Aristotle's definition of *homonyma* he uses the same verb in commenting on the possible omission of these two phrases.²²³ But if Porphyry was Simplicius' immediate source for F 68b, then, given the evidence of F 68c and our probable inference concerning F 68a, we must further infer that Porphyry took F 68b also from Boethus' commentary on the *Categories*. When we come to the discussion of F 68b

²²¹ Cf. *Homonymy*, p. 78, n. 17 and pp. 86-88, and the commentary *infra*.

²²² In F 68a Boethus says *à propos* of Speusippus' conception of *synonyma* (= identical words which have the same meaning) that it is in accordance with the ancients' use of this word, whereas in F 68c Porphyry reports that what "the moderns" call *synonyma* (= different words which have the same meaning) Speusippus called *polyonyma*. (On Speusippus' definitions of *homonyma*, *synonyma*, etc. cf. the commentary *infra*.) It is perhaps noteworthy that a few lines before citing Boethus' report on Speusippus' classification, Simplicius gives a rather extensive quotation from Porphyry (cf. *In Cat.*, p. 38, 1-6).

²²³ Cf. Porphyry, *In Cat.*, pp. 63, 2 and 64, 26-27 with *Homonymy*, p. 78, n. 19 and p. 84, n. 36 (on Dexippus).

in its context we shall find additional evidence for this view. In short, we may state that in all probability our ultimate source for Speusippus' doctrine of names is the Peripatetic philosopher Boethus of Sidon, who lived approximately in the second half of the first century B.C.

F 68a occurs in that part of Simplicius commentary where he discusses Aristotle's doctrine of *paronyma*. Simplicius is trying to justify the fact that in the *Categories* Aristotle deals with *homonyma*, *synonyma*, and *paronyma* but neither with the *heteronyma* nor with the *polyonyma* (cf. *In Cat.*, p. 38, 11-17 with *Homonymy*, p. 79). He then says πλὴν καλῶς ἔχει καὶ ἐκεῖνα τοῖς παραληφθεῖσιν εἰς μίαν διαίρεσιν συμπεριλαβεῖν (*In Cat.*, p. 38, 17-18), and at once mentions Speusippus' exhaustive classification of names, according to the report of Boethus (= F 68a). The first question to be decided is to whom does "we" in line 5 refer. Speusippus must certainly be excluded, since he would hardly have said of his own usage of *synonyma* κατὰ τὴν τῶν παλαιῶν συνήθειαν ἀκουόντων ἡμῶν τὰ συνώνυμα. Boethus is much more likely to be the subject than Simplicius, because in F 68c Porphyry says Boethus was wrong in saying that in Aristotle we do not find "the moderns'" use of *synonyma*, which is what Speusippus called *polyonyma*. From F 68c and from Simplicius' remarks preceding his quotation of Porphyry, as well as from Porphyry's remarks before F 68c (Simplicius, *In Cat.*, p. 36, 8-25), two things are clear: (a) that "the moderns" are the Stoics and (b) that the Stoics thought that *synonyma* are different words which have the same meaning,²²⁴ but that Speusippus called them *polyonyma*. And so the ἡμῶν in F 68a who think Speusippus' use of *synonyma* is in accordance with the usage of the ancients must be Boethus. This inference is reinforced by the fact that Simplicius, *In Cat.*, p. 36, 8-12 tries to justify Aristotle's conception of *synonyma* in the *Categories* against that of the Stoics.

Now if Boethus is the subject of the genitive absolute in F 68a, it follows that Simplicius is citing Boethus verbatim (the quotation from Boethus he probably found in Porphyry). This being so, the subject of φησί in line 2 could be either Speusippus or Boethus. But, even if the subject is Boethus, he is also the subject of the genitive absolute in line 4, and Simplicius is citing Boethus for his account of Speusippus' exhaustive classification of words; we must therefore

²²⁴ Cf. *Homonymy*, pp. 86-88.

infer that either Boethus himself cites Speusippus verbatim or at least is giving a summary of Speusippus' classification in the latter's own terminology.²²⁵

The second point we must decide before discussing Speusippus' classification as such is the extent of Simplicius' citation of Boethus' account about Speusippus in F 68a. The classification itself extends up to, and includes, the words τὰ δὲ παρώνυμα (*In Cat.*, p. 38, 24 = F 68a, 6). Thereafter begins an explanation of *polyonyma* and *heteronyma*. Cf. Simplicius, *In Cat.*, pp. 38, 24-39, 2: ἀλλὰ περὶ μὲν τῶν ἄλλων ἀποδέδοται, πολuwνυμα δὲ ἐστὶν τὰ διάφορα καὶ πολλὰ ὀνόματα καθ' ἑνὸς πράγματος, ὅταν εἷς καὶ ὁ αὐτὸς αὐτῶν ᾗ λόγος, ὥσπερ ἄορ ξίφος μάχαιρα φάσγανον· ἑτερώνυμα δὲ ἐστὶν τὰ καὶ τοῖς ὀνόμασιν καὶ τοῖς πράγμασιν καὶ τοῖς λόγοις ἕτερα, οἷον γραμματικὴ ἄνθρωπος ξύλον. Hambruch, pp. 27-29, Lang, pp. 24-26 and 66, Stenzel, cols. 1653-1654, and others think that also these words come from Boethus and refer to Speusippus, whereas Barnes, *op. cit.*, p. 69 and Heitsch, *Homonymie*, 51 ff., though they, too, believe that the passage in question comes from Boethus, nevertheless maintain that they do not refer to Speusippus. Now the agent of ἀποδέδοται cannot be Speusippus; for it is highly improbable that, having first discussed the *homonyma*, *synonyma*, and *paronyma* and having followed this up with his own exhaustive classification of names, he would then have said "but the others have been given" and have gone on to explain the *polyonyma* and the *heteronyma*. This is rather the procedure of a commentator on the *Categories*, and so there are two possibilities: Boethus or Simplicius. (If the agent is Porphyry, then Simplicius is citing him verbatim, and so it makes no difference for our purposes here.) Barnes thinks that the agent of ἀποδέδοται is Boethus because Simplicius has already discussed not only *homonyma*, *synonyma*, and *paronyma* but also *polyonyma* and *heteronyma* (cf. *In Cat.*, pp. 22, 14-23, 3). This argument, however, is not at all decisive. The passage in question is part of Simplicius' commentary on Aristotle, *Cat.* 1 A 1 and, though Simplicius there describes the five classes just mentioned, he does so in a summary way and then goes on to justify Aristotle for discussing in the *Categories* only the first three but not the last two kinds. All this does not prevent Simplicius from later commenting at length on *synonyma* and *paronyma* and from coming

²²⁵ Cf. *Homonymy*, pp. 80-81.

back to the five kinds in his commentary on *paronyma* (*In Cat.*, p. 38, 11 ff.). Here he once more tries to account for Aristotle's omission of *polyonyma* and *heteronyma* in the *Categories* and at once cites Speusippus' exhaustive *διαίρεσις* according to Boethus' report. Consequently, it is intelligible that in p. 38, 24 ff. Simplicius should discuss the *polyonyma* and the *heteronyma* in a more detailed way than he did before. Since it is hardly likely that the whole of *In Cat.*, pp. 38, 24-40, 4, or even pp. 38, 24-39, 16 can come from Boethus, and since the obvious break is in p. 38, 24 rather than in p. 39, 2, it seems more probable than not that the agent of ἀποδέδοται is Simplicius himself. This inference is corroborated by the following considerations: As was argued above, *In Cat.*, p. 38, 20-24 (τῶν . . . παρώνυμα = F 68a, 2-6) contains Speusippus' classification, and the genitive absolute in p. 38, 22-23 (= F 68a, 4-5) implies that in the rest of that passage Boethus is citing Speusippus' doctrine in the latter's own terminology. Now Simplicius is citing Boethus only for Boethus' report on Speusippus' classification but not for Boethus' own or Speusippus' own definition of each class of names. Therefore, it is highly improbable that with the words ἀλλὰ περὶ μὲν τῶν ἄλλων ἀποδέδοται Simplicius is still quoting Boethus and that Boethus himself is there shifting from his own report on Speusippus' classification to his own account of *polyonyma* and *heteronyma*. Yet, even if Boethus were the agent of ἀποδέδοται, *In Cat.*, pp. 38, 24-39, 2 could not be used as evidence of Speusippus' conception of *polyonyma* and *heteronyma* because the doctrine of these lines is not Speusippean, since it operates with the relation of a thing to its definition and its name and not merely with the Speusippean relation of ὄνομα to λόγος.²²⁶

Before we discuss Speusippus' exhaustive classification of names in F 68a, we must turn to F 68b-c, for these two texts will enable us to reconstruct Speusippus' definitions of *homonyma*, *polyonyma*, etc. and to discover the criterion he used in dividing the ὀνόματα. In F 68b we have the second part of Speusippus' definition of *homonyma*: "ὁ δὲ λόγος ἕτερος." This must be contrasted with Aristotle, *Cat.* I A 1-2: ὁμώνυμα λέγεται ὡν ὄνομα μόνον κοινόν, ὁ δὲ κατὰ τοῦνομα λόγος τῆς οὐσίας ἕτερος. Speusippus' definition, then, differed from that of Aristotle in the following ways: Aristotle's refers to things, Speusippus' to words (cf. F 68a and c); unlike

²²⁶ Cf. *Homonymy*, pp. 82-83 with n. 33.

Aristotle's the second part of Speusippus' definition did not contain either the words *κατὰ τοῦνομα* or *τῆς οὐσίας*. Now, the fact that Simplicius cites the second part of Speusippus' definition of *homonyma* in that part of his commentary where he discusses the words *κατὰ τοῦνομα* in Aristotle's definition and that he does not comment on the omission of *τῆς οὐσίας* in Speusippus' definition, does *not* mean, as Barnes thinks it does, that the latter phrase was part of Speusippus' definition.²²⁷ For there is no reason to think that either Simplicius or Porphyry accidentally or purposely omitted the words in question. The *argumentum ex silentio* is peculiarly inappropriate in this case because there is an obvious explanation for the two facts on which Barnes has based his interpretation. Simplicius and Porphyry are indebted to Boethus for their knowledge of Speusippus. It is only reasonable for Boethus to have cited the second part of Speusippus' definition of *homonyma* in that part of his own commentary (which we know was *καθ' ἐκάστην λέξιν* [cf. Simplicius, *In Cat.*, p. 30, 2]) where he discussed the expression *κατὰ τοῦνομα* in Aristotle's definition, because Boethus did not read nor know the reading *τῆς οὐσίας* in Aristotle's own definition of *homonyma*.²²⁸ And so from this point of view he could have seen no difference between Speusippus' and Aristotle's definitions. In short, there is no reason to question the reliability of Simplicius' report, which ultimately goes back to Boethus, that the second part of Speusippus' definition of *homonyma* was "*ὁ δὲ λόγος ἕτερος.*"

Speusippus' definition of *homonyma*, then, must have been approximately as follows: *ὁμώνυμα ὀνόματα λέγεται ὧν ὄνομα μόνον κοινόν, ὁ δὲ λόγος ἕτερος, ἢ ὁμώνυμα λέγεται ταῦτ' ὀνόματα, ὁ δὲ λόγος ἕτερος.* This is essentially different from Aristotle's definition in *Cat.* I A 1-2, since it classifies words, not things.²²⁹ We must infer

²²⁷ What follows in the text is based on the lengthier discussion given in *Homonymy*, pp. 83-85.

²²⁸ Cf. *Homonymy*, p. 84 with n. 36 and the references there given.

²²⁹ Merlan, *Philologus* 89 (1934), pp. 47-53 = *Kl. Schr.*, pp. 63-69, followed by Isnardi Parente, pp. 894-895, wrongly thinks that the difference between Speusippus' conception of *homonyma*, *synonyma*, etc. and that of Aristotle in the first chapter of the *Categories* is trivial. Against this cf. Barnes, *op. cit.*, pp. 65-67 and 70, n. 2. It is noteworthy that in the first book of the *Topics* and elsewhere, where his purposes are different from that of the *Categories*, Aristotle's use of *homonymon* is the same as Speusippus', that sometimes he uses *synonymon* in the Speusippean sense, but that his own notion of synonymous words (cf. *Rhet.* 1404 B 37-1405 A 2 and p. 417 *infra*) coincides with what Speusippus calls *polyonyma* (cf. *Homonymy*, pp. 87 and 91-99).

then that Speusippus' criterion in his exhaustive διαίρεσις τῶν ὀνομάτων was the relation of ὄνομα to λόγος. This is confirmed by his conception of *polyonyma*. For according to Boethus and Porphyry what "the moderns" (= the Stoics) called *synonyma*, that is, different words which have the same meaning, Speusippus called *polyonyma*. From this and from the evidence of F 68a-b we may reconstruct Speusippus' definition of *polyonyma* approximately as follows: πολυώνυμα λέγεται πολλὰ (or ἕτερα) ὀνόματα ὃ δὲ λόγος αὐτός. And, given the fact that the *synonyma* are one of the divisions of the ταυτώνυμα, of which the *homonyma* are the other, we may reconstruct his definition as συνώνυμα ὀνόματα λέγεται ταῦτ' ὀνόματα ὃ δὲ λόγος αὐτός. The ἰδίως ἑτερόνυμα are different words with different and unrelated meanings, whereas the *paronyma* are different words which have related meanings, e.g. δίκαιον, δικαίως, etc.

These three texts, then, provide evidence of Speusippus' use of division by means of the principle πότερον ταῦτὸν ἢ ἕτερον (cf. F 63a and F 64 with the respective comm.), of his use of the principle of ὁμοιότης (cf. F 65 with comm. *ad loc.*), and of the relation of word or name (ὄνομα) to concept or meaning (λόγος) as the basis of his classification of ὀνόματα. Thus, if we apply the principle πότερον ταῦτὸν ἢ ἕτερον, we obtain the first division: either two or more words are identical (ταυτώνυμα) or they are different (ἑτερόνυμα). If identical words express different meanings they are *homonyma*, and if they have the same meaning they are *synonyma*. In the case of the ἑτερόνυμα, if different words have different and unrelated meanings we have the ἰδίως ἑτερόνυμα; if they have the same meaning they are *polyonyma*. But different words can be related among themselves by similarity of form and of meaning, in which case we have the *paronyma*. It would appear that the *paronyma* ought to be an intermediate class between the ταυτώνυμα and the ἑτερόνυμα. Yet for Speusippus the strict application of the principle πότερον ταῦτὸν ἢ ἕτερον required the inclusion of the *paronyma* among the ἑτερόνυμα. It is ostensible that in establishing the *paronyma* as a class within the *heteronyma* his two principles of classification and division are operative: first πότερον ταῦτὸν ἢ ἕτερον and then ὁμοιότης, i.e. similarity. It is merely because he disregards the application of the principle of "similarity" in the case of the *paronyma* that Guthrie, *History*, V, p. 464, n. 5 believes that in the *heteronyma* we have a trichotomy. (He also thinks [*op. cit.*, pp. 465-466] that Speusippus' classification refers to things,

not to words.) But the fact that Speusippus used dichotomy as the basis of classification does not exclude that by the further application of the principle of *ὁμοιότης* he can establish relations among the classes and within the classes (cf. pp. 60-62 and 64 ff. *supra*). We must always keep in mind that the purpose of Speusippus' classification is essentially different from that of Aristotle; for what he tried to do was to establish a "map" of the whole of reality as the only basis of knowledge and of definition.²³⁰

There is some evidence that Speusippus applied his classification of *ὀνόματα* (where *ὀνόματα* should be taken in the wider sense, so that at least nouns, adjectives, and verbs be included) to the investigation of ambiguity in arguments (cf. F 5a-b and F 69a-b with the respective comm.), and that from this point of view he exercised some influence on Aristotle (cf. Tarán, *Homonymy*, pp. 91-99 and pp. 72-77 *supra*).

F 69a-b

In *Soph. Elench.* 170 B 12-171 B 2 (= F 69a) Aristotle attacks a doctrine that divides all arguments into *πρὸς τοῦνομα* and *πρὸς τὴν δianoia*, while in 177 B 7-9 (= F 69b) he contends that not all refutations are *παρὰ τὸ διττόν*, as some people think. Poste, *Aristotle on Fallacies*, p. 151 thought that the person who in F 69b is said to have reduced all fallacies to equivocation is probably the person criticized in F 69a, and very likely a Platonist.²³¹ Cherniss, I, n. 47

²³⁰ In fact the only thing that the extract from Boethius given by Simplicius tells us is that the *ἰδίως ἑτερόνομα*, the *πολυώνυμα*, and the *παρόνομα* fall within the *heteronyma*. We are not told in the whole of F 68a, nor in F 68b-c, either, what are the criteria used for classification, though our inferences seem to be justified by the very wording of these fragments and by other evidence we have about Speusippus. But it is possible that Speusippus himself gave further explanations as to how he classified the *heteronyma* and even that Boethius himself said more than what Simplicius and/or Porphyry chose to preserve.

²³¹ Poste, *op. cit.*, p. 123, on the basis of a passage of Eudemus preserved by Simplicius, *In Phys.*, p. 98, 1-3, suggested that the butt of Aristotle's criticism in F 69a is Plato. But Eudemus merely says that Plato solved many difficulties by the introduction of *τὸ δισστόν* (cf. also Eudemus in Simplicius, *In Phys.*, pp. 115, 27; 120, 8-9; 242, 28-243, 3), a procedure attested in Plato's dialogues (cf. Shorey, *CP* 25 [1930], p. 80). And Plato also insisted upon the principle of arguing to the thing signified rather than to the word (cf. Cherniss, *op. cit.* in the text *infra* with his reference to *Cratylus* 439 A-B and *Sophist* 218 C). All this, however, is not evidence that he reduced all sophistical refutations to ambiguity, and there is nothing else in F 69a-b that points to Plato as the author of the theory Aristotle rejects.

[p. 58] accepted Poste's interpretation and suggested that the butt of Aristotle's argument in both passages is Speusippus. The reasons Cherniss offers for this *probable* identification are two. First, the importance attached by Speusippus to the "division of words" and the relation of word to concept as the basis of this division. Second, the fact that from 171 A 12-16 (= F 69a, 35-38) it appears that the proponents of the doctrine attacked by Aristotle held mathematics to be the model of unambiguous terms. With characteristic rashness Barnes, *CQ* N.S. 21 (1971), pp. 67-68 rejects Poste's and Cherniss' interpretations on the grounds that Poste's identification of the τινές of F 69b with those criticized in F 69a is "no more than a guess," that the two classifications are compatible but logically independent, and that there is more reason to connect the men of F 69b with those criticized at 179 B 38-180 A 7 and 182 B 22-27. Against Cherniss he adds that there is no evidence that Speusippus attached any importance of the required sort to his division of names and that, even if there were, that "would be curious ground for ascribing to him the view that all fallacies are due to equivocation."²³²

To begin with, one must say that Barnes has rejected Poste's identification of the τινές of F 69b with those criticized in F 69a apparently without considering the implications of 170 B 12-171 B 2, for, as we shall presently see, there is in this passage evidence in favor of Poste's view. But, before we discuss that question, it is necessary to say that in 177 B 7-9 the context and Aristotle's very wording (ὥστ' οὐ διττὸν τὸ παρὰ διαίρεσιν. φανερόν δὲ καὶ ὅτι οὐ πάντες οἱ ἐλεγχοὶ παρὰ τὸ διττόν, καθάπερ τινές φασιν) show that he is referring to something that precedes the words just cited. In fact, he is referring to his discussion in the immediately preceding passage, 177 A 9-B 7, where he has tried to show how to solve the fallacies depending on language, some of which are due to ambiguity, others to composition and division.²³³ Now, whereas neither in 179 B 38-180 A 7 nor in 182 B 22-27 is it necessarily implied that those

²³² Barnes' contention that Speusippus' interest in equivocation was by no means unique and his citation of Stanford, *Ambiguity in Greek Literature*, pp. 2-5 are not cogent at all. For, besides the fact that Cherniss himself referred to Plato's interest in ambiguity as a source of fallacies (cf. the previous note), the point at issue is who was the probable author of the doctrine that all sophistical refutations are due to equivocation.

²³³ It is noteworthy that some of the examples Aristotle gives in 177 A 9-B 7 are the same he used in the course of criticizing the doctrine of F 69a.

alluded to in either passage reduced *all* sophistical refutations to ambiguity, it is quite clear that this is the view implicitly ascribed to the people attacked in F 69a. For, against those who said that all reasonings are either *πρὸς τοῦνομα* or *πρὸς τὴν διάνοιαν* and that this division is exhaustive (170 B 30-35 = lines 16-20), Aristotle offers arguments which presuppose that these thinkers thought that all sophistical refutations are *πρὸς τοῦνομα*. Thus he contends (a) that only *some* ambiguous reasonings are addressed to the word (170 B 35-36 = lines 20-22: *ἀλλὰ μὲν ὅσοι συλλογισμοὶ εἰσι παρὰ τὸ πλεοναχῶς, τούτων εἰσὶ τινες οἱ παρὰ τοῦνομα*), and (b) that it is also incorrect to say that all fallacies of diction are addressed to the word (170 B 36-38 = lines 22-23: *ἀτόπως μὲν γὰρ καὶ εἴρηται τὸ παρὰ τοῦνομα φάναι πάντας τοὺς παρὰ τὴν λέξιν*). Later, having argued that in fact there is no distinct class of reasonings addressed to the thought as opposed to those addressed to the word, Aristotle again says that there is indeed a class of reasoning addressed to the word, but that this class does not include all confutations, nor all fallacious confutations, and that there are some which are independent of language (cf. 171 A 23-27 = 44-47: *οὐκ ἄρα ἐστὶ γένος τι λόγων τὸ πρὸς τὴν διάνοιαν. ἀλλ' οἱ μὲν πρὸς τοῦνομά εἰσι· καίτοι οὗτοι οὐ πάντες, οὐχ ὅτι οἱ ἔλεγχοι ἀλλ' οὐδ' οἱ φαινόμενοι ἔλεγχοι. εἰσὶ γὰρ καὶ μὴ παρὰ τὴν λέξιν φαινόμενοι ἔλεγχοι, οἷον οἱ παρὰ τὸ συμβεβηκὸς καὶ ἕτεροι*). In short, then, those attacked in F 69a for dividing all arguments into *πρὸς τοῦνομα* and *πρὸς τὴν διάνοιαν* must have reduced all sophistical refutations to ambiguity. And so Poste's identification of the *τινές* of 170 B 12 ff. with those of 177 B 7-9 is almost certainly right, since nowhere else in the *Sophistici Elenchi* does Aristotle mention this doctrine again.²³⁴ That from the point of view of logic the doctrine that reduces all fallacies to equivocation need not also divide all arguments into *πρὸς τοῦνομα* and *πρὸς τὴν διάνοιαν*, is irrelevant for the point at issue here.

To my mind the probable grounds for ascribing to Speusippus the doctrine Aristotle criticizes in F 69a-b are the following: (a) Those who divided *all* arguments into *λόγοι πρὸς τοῦνομα* and *λόγοι πρὸς τὴν διάνοιαν* thought that this division is exhaustive (cf. 170 B 33-35 = lines 19-20: *οἱ δὲ φασὶ πάντας* [sc. *λόγους*], *καὶ διαιροῦνται ἢ*

²³⁴ It is likely, however, that in 179 B 38-180 A 7 and in 182 B 22-27 Aristotle's butt is still the same doctrine as that attacked in F 69a-b (cf. pp. 73-75 *supra*).

πρὸς τοῦνομα ἢ πρὸς τὴν διάνοιαν εἶναι πάντας, ἄλλους δ' οὐ); and we know that exhaustive dichotomic division was characteristic of Speusippus (cf., with the respective comm., F 63a-b, F 67, and F 68a-c, with pp. 64-77 *supra*). (b) The relation of word to concept was the basis of Speusippus' exhaustive division of names (F 68a-c). Such an exhaustive classification of ὀνόματα has obvious application to the discovery of ambiguity in as much as it enables one to determine by exhaustion the meaning of words and sentences. And there is some evidence that Speusippus did so use it. For, when in ch. 15 of the first book of the *Topics* Aristotle discusses ambiguity, he twice (107 B 4 and 17) uses *synonymon* in the Speusippean sense, namely, that a word is used synonymously if it refers to a single undifferentiated concept. The significance of this usage is that this conception of *synonymon* is different not only from Aristotle's definition of *synonyma* in *Cat.* 1 A 6-7 and elsewhere but also from Aristotle's conception of synonymous words in *Rhetoric* 1404 B 37-1405 A 2, according to which synonymous are two or more words which have the same meaning (i.e. what Speusippus called *polynyma* [cf. Tarán, *Homonymy*, pp. 85-87 and 95]). This and the presence in that same chapter of the *Topics* of the Speusippean "topic" of the relation of ὄνομα to λόγος (cf. 107 A 3-4, 20, B 21-23, 27-29, and 33-34) show that ch. 15 of the first book of the *Topics* stands in some sort of relation to one or more works of Speusippus (cf. Tarán, *op. cit.*, pp. 91-97 and pp. 75-76 *supra*, where it is shown that Speusippus' influence is also apparent in chs. 16-18 of that book of the *Topics*). It is therefore reasonable to infer that Speusippus himself must have investigated ambiguity by means of his exhaustive division of names. And the classification of arguments into πρὸς τοῦνομα and πρὸς τὴν διάνοιαν is of a piece with the basis of Speusippus' division of words, namely the relation of ὄνομα to λόγος. (c) Speusippus' use of τὸ διττόν as a means of avoiding ambiguity is attested in F 5a (= *Soph. Elench.* 174 B 19-27). (d) It is clear from 171 A 12-16 (= lines 35-38) that those who divided arguments into πρὸς τοῦνομα and πρὸς τὴν διάνοιαν gave as an example of arguments of the latter class those used in mathematics, precisely because in these sciences the words are used without ambiguity. This follows from Aristotle's supposition that originally the respondent may think that "triangle" is ambiguous (cf. 171 A 13-14 = line 36 καὶ εἴ τινα δοκεῖ πολλὰ σημαίνειν τὸ τρίγωνον, κτλ.). The reference to mathematics as models of unambiguous terms

points to Speusippus rather than to Plato or Xenocrates, since he posited *mathematical* numbers and magnitudes as the separate and unchangeable objects of thought and denied that they are to be identified with ideas (cf. F 29a and F 31-36). Hence, for him arithmetic and geometry become the paradigmatic sciences (cf., with the respective comm., F 28 and F 70-74, and pp. 20 ff. and 61-62 *supra*). On Aristotle's criticisms in F 69a-b cf. pp. 73-75 *supra*.

F 70

Some scholars (e.g. I. Casaubon, on Diog. Laert. IV, 2; Solmsen, *Die Entwicklung der aristotelischen Logik*, p. 252 and n. 3; Merlan, *From Platonism*², p. 103 with note) have taken this statement to refer to the mathematical sciences only, and Merlan contends that Speusippus' investigation of the principles common to all branches of mathematics influenced the topic and the title of Iamblichus' *Περὶ τῆς κοινῆς μαθηματικῆς ἐπιστήμης*. This interpretation has been rightly rejected by several critics (e.g. Brandis, II, b, i, p. 8 and n. 21; Zeller, II, i, pp. 996-997 and 997, n. 1; Lang, pp. 23-24; Stenzel, cols. 1652, 66-1653, 4; Cherniss, I, p. 57 and n. 55 [p. 74]; Kullmann, *Wissenschaft und Methode*, p. 148 and n. 40; Tarán, *Academica*, pp. 150-151 with n. 645), who think that here τὰ μαθήματα is not restricted to mathematics and that this statement has to do with Speusippus' conception of the unity of all knowledge.

To begin with, it is necessary to say that, *pace* Solmsen (*op. cit.*, pp. 80, n. 4 and 252, n. 3), τὰ μαθήματα need not mean "mathematics" but that its meaning must be determined from the context. It is to be noticed that Diodorus said that Speusippus was the *first* (πρῶτος) to see τὸ κοινὸν ἐν τοῖς μαθήμασιν. He could hardly therefore have meant to refer only to mathematics, for, whoever this Diodorus may have been, he must have known that the unity of the mathematical sciences is a tenet of Plato's philosophy (cf. *Republic* 531 C 9-D 4, 537 C 1-3, *Laws* 818 D 5-6, 967 E 2-3; Tarán, *op. cit.*, p. 27 with notes 112-113). Plato himself even ascribed this notion to the Pythagoreans (*Republic* 530 D 7-9 with Shorey, *Rep.* II, p. 189, n. e), while the author of the *Epinomis* (991 D 8-992 A 1) singled out the theory of proportions and means as the reason for the community of the mathematical sciences (cf. Tarán, *op. cit.*, pp. 345-346).

Even from the evidence we have about what Speusippus considered to be τὸ κοινόν in the mathematical sciences themselves, we

can infer that this statement of Diodorus must not be taken as restricted to them only. Thus, in F 28, lines 5-9 we are told that in the first half of his treatise "On Pythagorean Numbers" Speusippus discussed the individual and *common* properties, as well as the analogy and correspondence (ιδιότης τε αὐτῶν καὶ πρὸς ἄλληλα κοινότης, ἀναλογία τε καὶ ἀντακολουθία) of numbers and figures, and in the verbatim quotation in this very fragment Speusippus himself exemplifies this method of his (cf. F 28, lines 33-36, 38-62, esp. with comm. on F 28, lines 8-9 and 9). We also know that he saw a relation of similarity between the different ἀρχαί which he ascribed to the several kinds of οὐσίαι he posited (cf. F 29a, F 30, F 37). For the point is like the One and the "material" principle of magnitudes is similar to πλῆθος but not identical with it (cf. Aristotle, *Metaphysics* 1085 A 31-34 = F 51; *Topics* 108 B 23-31 = F 65). But he also thought that any entity is like a point (*Metaphysics* 1044 A 7-8 = F 66a), and so it is clear that for him τὸ κοινὸν ἐν τοῖς μαθήμασιν must have been what is common to all the ἀρχαί, and also to all the entities, for he saw the relation of similarity (ὁμοιότης) as a unifying bond among the classes and within the classes (cf. F 6-27, F 29a, F 51, F 65, F 66a-b, F 67, F 68a-c). It is therefore intelligible that for Speusippus all the different sciences are unified into a single science of all reality (cf. also F 71) by the characteristics and principles common to all of them. This single science he considered to be made possible by means of an exhaustive classification of all reality in which the relations of each thing to every other and to the whole were specified (cf. F 63a with comm. *ad loc.* and pp. 53-77 *supra*).

It is therefore to this single science of all reality that Diodorus' statement refers. The second part of it, namely, that Speusippus bound the sciences to each other as much as possible, implies that this single science of all reality did not eliminate the existence of the individual sciences. Speusippus, then, probably identified the knowledge of the former with philosophy (cf. on F 71).

Menagius (on Diog. Laert. IV, 2) thought that of the many "Diodori" the author of this statement about Speusippus was the Peripatetic philosopher. Wilamowitz, *Antigonos*, p. 329 identifies him with the mathematician and student of Posidonius, probably merely because he took F 70 to refer to mathematics. So, too, does Schwartz, *RE* II (1895), col. 171, 37-42, who thinks that Diodorus' *Memorabilia* was concerned with the Old Academy. This may be so

or not; but surely the title of Diodorus' work shows it is unnecessary to think that he was himself a philosopher and/or a mathematician. And, as Schwartz says, we do not know when he lived. This Diodorus is likely to be the same Diodorus cited in *Acad. Index Hercul.* T, 1-6 (pp. 57-58 [Mekler]) for a statement on Polemon (?) in which Speusippus' name is mentioned. The text printed by Mekler is unintelligible, however, *pace* A. Ievoli, *Cronache Ercolanesi* 3 (1973), p. 93, whose translation of lines 1-4 is impossible; and even Crönert's reconstruction of these lines (*Hermes* 38 [1903], pp. 385-386) is unconvincing.

F 71

Context. In ch. 32 of the first book of the *Posterior Analytics* Aristotle is concerned with showing that all syllogisms, i.e. all scientific demonstrations, cannot have the same ἀρχαί. We must take into consideration that for Aristotle each science has its own peculiar ἀρχαί which are indemonstrable, but that there are also indemonstrable ἀρχαί common to all the sciences (cf. *Anal. Post.* 76 A 37-B 16). The former cannot be deduced from the latter, but of the latter each single science must assume as much as falls within its genus. Moreover, principles and demonstrations peculiar to one genus cannot be transferred to another (e.g. those peculiar to arithmetic cannot be transferred to geometry). But in the case of subaltern sciences (e.g. harmonics is subaltern to arithmetic; optics to geometry) such a transference is possible (cf. *Anal. Post.* 75 B 14-17, 76 A 9-15).

Ch. 32 of *Anal. Post.* I falls into two parts. In the first (88 A 18-B 8) Aristotle shows that all syllogisms cannot have the same ἀρχαί. He first considers the question abstractly or dialectically (λογικῶς) by taking into consideration the case of false syllogisms, both when the conclusions are true (88 A 19-26) and when the conclusions are false (88 A 27-30). Thereafter he confines himself to true syllogisms (88 A 30-B 8) and shows that from his previous discussion in book I of the *Posterior Analytics* it follows that all true syllogisms cannot have the same ἀρχαί. For of many of the true conclusions the ἀρχαί differ generically and cannot be transferred from one genus to another. For example, monads cannot take the place of points, since the latter have position, whereas the former do not (88 A 31-34: a critical allusion to Speusippus' theory [cf. F 65 with comm. *ad loc.*]). This means that monad and point, which are respectively

ἀρχαί of number and of magnitude, do not belong to the same genus. Aristotle then refers to the conditions which make this transference possible (88 A 34-36) and proceeds to argue that the ἀρχαί common to all the sciences cannot serve as premisses to prove all conclusions (88 A 36-B 3). This inference he then reinforces with the further argument that the ἀρχαί cannot be much fewer than the conclusions, since the number of conclusions is indefinite, and that some ἀρχαί are necessary, whereas others are possible (88 B 3-8; the difficulties of this passage need not concern us here).

The second part of ch. 32 (88 B 9-29) begins with the contention that, if the number of conclusions is indefinite, there cannot be the same finite number of ἀρχαί for all conclusions. (This I take to be the meaning of ἀδύνατον τὰς αὐτάς [sc. ἀρχάς] εἶναι πεπερασμένους in 88 B 9-10.) Aristotle then examines and rejects three possible interpretations of the view that the ἀρχαί of all the sciences are the same: (a) it cannot mean that all the ἀρχαί are self-identical (88 B 10-15), (b) nor that from all the ἀρχαί together any conclusion can be drawn (88 B 15-21); and so (c) there remains the possibility that the ἀρχαί of all things are of one kind (συγγενεῖς) but that each set of special conclusions are derived from different ἀρχαί (88 B 23-29).

1-6. These lines are concerned with refuting the third possible meaning Aristotle gives to the view that the ἀρχαί of all the sciences are the same, namely, that all the ἀρχαί are within one genus but that the particular conclusions of each science are derived from different ἀρχαί. Cherniss, I, n. 55 [esp. pp. 74-75] has argued with plausibility that this is a formulation by Aristotle himself of Speusippus' conception of a single science of all reality, where the ἀρχαί of the particular sciences are part of a single set of principles because they are connected among themselves by the bond of similarity (ὁμοιότης).²³⁵ (Cf. F 70 with note *ad loc.*) This theory Aristotle refutes with the argument that the ἀρχαί of things generically different are themselves generically different. For there are two kinds of ἀρχαί, those from which and those about which. The

²³⁵ Cherniss' interpretation has been accepted by Ross, *Aristotle's Analytics*, p. 605, Düring, *Aristoteles*, p. 100 and n. 332, and Kullmann, *Wissenschaft und Methode*, p. 149 with notes 43-44. Barnes, *Aristotle's Posterior Analytics*, p. 188 and M. Mignucci, *L'Argomentazione dimostrativa in Aristotele* (Padova, 1975), p. 642 mention it without comment.

former are common principles, but the latter are peculiar to each science (cf. *Anal. Post.* 75 A 39-B 8). As examples of entities which have their peculiar ἀρχαί Aristotle mentions number and magnitude. This very example shows that Aristotle is here thinking of Speusippus (cf. also 88 A 31-34 with the note previous to this), since there is evidence that Speusippus thought that there is a relation of similarity between numbers and magnitudes (cf. F 28, lines 5-9, 33-36, 38-62 with comm. on F 28, lines 8-9 and 9) and between their respective ἀρχαί (cf. *Metaphysics* 1085 A 31-34 = F 51). Moreover, when in *Topics* 108 B 23-31 (= F 65) Aristotle refers to Speusippus' use of ὁμοιότης, the example he mentions is the similarity of point to monad, and he states that in this way Speusippus was able to bring together into the same class and to define things which are *generically* different (cf. on F 65). (On Aristotle's criticism of this aspect of Speusippus' doctrine here and elsewhere cf. pp. 62-64 *supra*.)

Aristotle's formulation and criticism of Speusippus' doctrine here does imply that Speusippus' view of the unity of all knowledge does not preclude the existence of the individual sciences and of experts in particular fields who need not have the wider and more general knowledge he obviously required of the philosopher.

F 72-74

Since these three texts come from his *In Euclidem*, and since they are related to one another so far as Speusippus is concerned, it seems best to discuss them in the order in which Proclus gives them.

After a discussion of the purpose of Euclid's *Elements* (pp. 70, 19-71, 24) and of the meaning of the word στοιχείων in its title (pp. 71, 24-75, 4), Proclus explains the arrangement and the kinds of propositions in Euclid's book (pp. 75, 5-81, 22). He begins with the general distinction between the undemonstrable principles (ἀρχαί) of demonstrative science and the conclusions that follow from them (συμπεράσματα). The former are known directly, the latter through the former (p. 75, 5-26). He then says that Euclid divided the ἀρχαί into hypotheses (ὑποθέσεις), postulates (αἰτήματα), and axioms (ἀξιώματα), and refers to Aristotle for the differences between these three kinds of propositions (cf. *Anal. Post.* 76 A 31-77 A 4). Euclid, however, distinguishes between definitions (ὅροι), postulates (αἰτήματα), and "common notions" (κοινὰ ἔννοιαι). In addition Proclus is confused about the distinction between ὑποθέσεις and ὅροι in

Aristotle.²³⁶ Be that as it may, Proclus states that an axiom is a proposition known to the learner and credible in itself; a hypothesis is a proposition which is not self-evident to the student but which he consents to be posited as true; and a postulate is a proposition unknown to the student but which is taken as true without the student's conceding it (pp. 75, 27-77, 6).

Proclus discusses next the propositions that follow from the first principles and which are divided into problems (προβλήματα) and theorems (θεωρήματα).²³⁷ A problem consists in accepting conclusions by means of construction of figures (cf. 77, 8-11 and 179, 1-2), while a theorem is the demonstration of an essential attribute of a figure (cf. pp. 77, 11-12 and 178, 14-179, 1). How old this distinction is we do not know. But it is clear from what Proclus says in F 72 and F 74 that it must have been known to Speusippus, though as we shall see Speusippus' notion of "theorem" is different from Proclus'.²³⁸ For according to Proclus, among the ancients Speusippus

²³⁶ On this and on the attempts made to relate Euclid's to Aristotle's terminology cf. Heath, *Euclid's Elements*, I, pp. 117-124. On the general question of Aristotle's logical terminology and its relation to mathematics cf. Einarson, "On Certain Mathematical Terms in Aristotle's Logic," *AJP* 57 (1936), pp. 33-54 and 151-172.

²³⁷ Cf. *In Euclidem*, p. 77, 7-8. Morrow, *Proclus on Euclid*, p. 63 wrongly translates διαιρείται as "he divides," for the subject of the verb can be neither Aristotle, who is not cited by Proclus to this effect and who made no such distinction between theorems and problems in mathematics (cf. note 238 *infra*), nor Euclid, in whom this distinction does not occur. Proclus later ascribes it to him but merely on the basis of Euclid's procedure (cf. p. 81, 5-22). (On Proclus' own discussion of theorems and problems cf. pp. 77, 7-81, 4 and Heath, *op. cit.*, pp. 124-129.) It is clear then that διαιρείται is passive and that its subject is τὰ ἀπὸ τῶν ἀρχῶν, cf. Heath's translation, *op. cit.*, I, p. 124.

²³⁸ From F 72 and F 74 it appears that Speusippus must have known that geometrical constructions were called "problems" (see the text *infra*) and that he himself proposed to call "theorem" all derivative knowledge about eternal entities (cf. also F 73). Plato in *Theaetetus* 180 C uses "problem" of a question for which a solution is sought. In *Republic* 530 B the word is used in reference to the procedures of geometry and astronomy and in 531 C 1-4 in connection with the appropriate procedure of harmonics. The latter passage provides some evidence about the Platonic meaning of "problem": τοὺς γὰρ ἐν ταύταις ταῖς συμφωνίαις ταῖς ἀκουσμέναις ἀριθμοὺς ζητοῦσιν, ἀλλ' οὐκ εἰς προβλήματα ἀνίσταν, ἐπισκοπεῖν τίνες σύμφωνοι ἀριθμοὶ καὶ τίνες οὐ, καὶ διὰ τί ἑκάτεροι. It seems, then, that for Plato to proceed in geometry, astronomy, and harmonics by means of problems meant to formulate the questions and to find the cause or explanation of certain phenomena in an abstract way. Had he known of the use of "problem" to designate geometrical constructions, he would have warned us against confusing this construction

and Amphinomous²³⁹ considered that in the *theoretical* sciences (e.g. arithmetic and geometry) all indirect and demonstrated knowledge should properly be called *θεώρημα*,²⁴⁰ not *πρόβλημα*. And this not merely because these sciences are about abstract and non-sensible objects but particularly because in them the propositions are about *eternal* things (περὶ αἰδίων . . . τοὺς λόγους). Now among eternal things there is no generation, whereas a problem proposes to bring into being something not previously existing, e.g. to construct an equilateral triangle, etc. This does not mean that Speusippus denied the appropriateness of constructing figures.²⁴¹ He thought, however, that it is better to say that all these things (i.e. the objects of geometry) exist,²⁴² and that we must consider the construction of them not as a making (οὐ ποιητικῶς) but as a knowing (ἀλλὰ γνωσι-

with the eternal entities which are the true objects of geometry (cf. note 243 *infra*). It is at any rate clear that he himself does not use the word in this specific sense. In Aristotle's logic (he does not use the word in connection with mathematics) a problem is a question concerning the truth or falsehood of a proposition (cf. esp. *Topics* 101 B 28-37, Einarson, *op. cit.*, p. 40 and n. 31). On Menaechmus' conception of problems cf. the remarks in the text *infra* on F 72.

²³⁹ Here Proclus' expression οἱ περὶ Σπεύσιππον καὶ Ἀμφινόμον need not mean more than "Speusippus and Amphinomous." Of the latter nothing is known except what Proclus tells us here and in pp. 202, 9-12, 220, 9-12, 254, 2-5. As Morrow, *op. cit.*, p. 63, n. 66 says, all these references suggest that he was a contemporary, apparently an older contemporary, of Speusippus. At any rate, since the doctrine of F 72 is Speusippean, and since only Speusippus is cited in F 73, I have discussed these three texts only in reference to him.

²⁴⁰ For the distinction between *θεώρημα* and *ἀξιωμα* in Speusippus cf. on F 73 and F 74 *infra* and also notes 241, 245, and 248.

²⁴¹ Isnardi Parente, p. 919 (bottom) mistakenly thinks that Speusippus intended to banish from mathematics constructions of figures as such: "la testimonianza di Proclo . . . , che ci dice come Speusippo non ammettesse nella matematica procedimenti operativi e costruttivi, ma solo *θεωρήματα* enunciante le proprietà essenziali delle figure, . . ." In part her mistake is due to failure to understand F 72, in part to her failure to see that *θεώρημα* in Speusippus is not limited to strict geometrical proof but includes any procedure by which we acquire indirect knowledge of eternal entities. For a similar misunderstanding of "theorem" in Speusippus cf. Einarson, *op. cit.*, p. 41 with n. 38.

²⁴² In p. 78, 4 = F 72, 9 it is necessary to read πάντα ταῦτα ἔστι for Friedlein's πάντα ταῦτά ἐστι, as Tannery, *La géométrie grecque* (Paris, 1887), p. 137 with n. 1 and *Mém. Sc. IX*, p. 126 saw. Cf. also Cherniss, *Review of Metaphysics* 4 (1951), pp. 408-409 with n. 36 = *Selected Papers*, pp. 235-236 (against Mugler's misunderstanding of Friedlein's text) and Morrow, *op. cit.*, p. 64 with n. 67. Stenzel, col. 1659, 27 proposes the same reading but does not mention Tannery at all.

κῶς), since we apprehend the eternal things (τὰ ἀεὶ ὄντα) as if they were in the process of coming into being. Hence all these things are apprehended theorematologically (i.e. as a vision of eternal entities) and not problematically (i.e. not as if there is an actual generation). Proclus then goes on to say that Menaechmus and the mathematicians of his school thought it correct to call all derivative mathematical knowledge "problem," but said that problems are of two kinds: they may aim at providing something sought for; or they may investigate the essence, qualities, etc. of a given object. The rest of this text, where Proclus expresses agreement in part with Speusippus and in part with Menaechmus, need not concern us here, since it presupposes Proclus' own conception of intelligible matter and the rôle he assigns to the imagination in mathematics.

Speusippus, then, was in all probability arguing against the established, or at least the common practice of geometricians of calling "problems" all geometrical constructions. Possibly he even knew that some like Menaechmus had proposed to call all derivative mathematical knowledge "problem." His argument was metaphysical, for he thought that the objects with which the geometrician concerns himself are not the sensible triangle, circle, etc. which is "constructed," but eternal entities which have separate existence.²⁴³ He thought that when a geometrical construction takes place, for example that of an equilateral triangle, we come to know it or to apprehend it. This shows that for him our knowledge of the separately existing magnitudes is not direct but derivative (cf. also *infra* on F 73 and pp. 54-56 *supra*). It is also intelligible why Speusippus thought that in the theoretical sciences all derivative knowledge should be called θεωρήματα: the objects the mind apprehends are eternal, and so our coming to know them is really the "sight" or apprehension of them.²⁴⁴ It is clear, then, both from F 72 and also from F 73 and 74 that for Speusippus θεωρήματα is not limited to

²⁴³ Cf. Plato's similar argument in *Republic* 527 A-B (cf. also *Euthydemus* 290 B-C) with Shorey, *Rep.* II, pp. 170, n. b and 171, n. f and Cherniss, *op. cit.*, pp. 423-424 = *Selected Papers*, pp. 250-251. On the same basic attitude on the part of Aristotle towards mathematical knowledge cf. Cherniss, *op. cit.*, p. 423, n. 66 with references.

²⁴⁴ The very argument Proclus ascribes to Speusippus in F 72 shows that he probably thought it appropriate to use "problem" in the case of disciplines such as mechanics, the objects of which are sensible entities.

geometrical proof but refers to any kind of derivative knowledge of eternal entities.²⁴⁵

Speusippus' argument for the metaphorical interpretation of geometrical constructions shows that he could not have meant to generate his eternal numbers either (cf. F 41 and comm. *ad loc.*). And we have evidence that he cited the analogy of geometrical constructions in support of the metaphorical interpretation of the creation of the universe in Plato's *Timaeus* (cf. F 61a-b with comm. *ad loc.*, and my comments on terminology *infra*).

The next important passage concerning Speusippus (F 73) occurs in a context (cf. pp. 178 ff.) where Proclus is trying to draw a clearer distinction between postulates and axioms than that he made in pp. 75, 27-77, 6. He first gives as the common characteristic of the two that they require neither demonstration nor geometrical proof but are accepted as known and taken as the starting points of demonstration. Nevertheless there is a difference between axioms and postulates similar to that between theorems and problems. The axioms assume things which are in themselves immediately evident and easily accessible to our untaught understanding; in the case of postulates we assume things which can easily be brought about or devised, for they do not require any great exercise of reasoning, nor any complex construction. Therefore, clear knowledge without demonstration and assumption without elaboration distinguish axioms and postulates, just as demonstrative knowledge and assumptions by means of constructions distinguish theorems and problems (pp. 178, 9-179, 12).

It is necessary, says Proclus, that the principles (*ἀρχαί*) differ

²⁴⁵ We must be careful therefore not to confuse (as some scholars do, cf. note 241 *supra*) Speusippus' use of *θεώρημα* with that of Proclus and others for whom the word means geometrical demonstration or proof.

The word *θεωρήματα* occurs only once in Plato, but it designates the public festivals, i.e. visible things (cf. *Laws* 953 A 3-4). Aristotle for his part several times mentions *θεωρήματα* in connection with mathematics (cf. *Metaphysics* 1083 B 18, 1090 A 13 = F 36, 1090 B 28, 1093 B 15), without specifying whether by it he means mathematical proof or something more general. In F 36, however, he argues against Speusippus that all the *θεωρήματα τῶν ἀριθμητικῶν* are true even of sensible things (cf. 1077 B 17-22) and implies that Speusippus' separately existing numbers are therefore unnecessary to explain the truth of the *θεωρήματα*, while in *De Motu Animal.* 701 A 8-11 he uses *θεωρήματα* of syllogistic proof. It is therefore likely that *θεώρημα* = "geometrical or mathematical proof" originated either with Aristotle or with some contemporary mathematicians.

from the derivative propositions in being simple, undemonstrable, and self-evident (p. 179, 12-14 = F 73, 1-2), and he at once cites Spusippus for the distinction he made between the principles and the knowledge that derives from them (p. 179, 14-22 = F 73, 2-8). Before we discuss this text it is important to keep in mind that in this context ἀρχαί for Proclus means axioms and postulates.

According to Speusippus a general distinction must be made between the knowledge of the undemonstrable principles and the knowledge that derives from them. For, of the things in the search of which our understanding is engaged, some it posits without any elaborate excursion and makes them ready for further inquiry; and our mind has a clearer contact with these objects than sight has with visible things. In other words, these objects the mind apprehends directly because they are self-evident. Other objects, which it is unable to apprehend directly, the mind manages to capture by their consequences, advancing on them step by step. Lang thought that the reference to Speusippus ends with the word θήραν in p. 179, 22 (= F 73, 8). But Cherniss, I, n. 322 [pp. 396-397] has argued that also pp. 179, 22-180, 1 refer to Speusippus, since the conception of the line as the fluxion of a point was Speusippus' own doctrine (cf. F 52 with comm. *ad loc.*). In spite of this, however, it is unlikely that also the lines in question refer to him for the following reasons. It is clear that of the four examples of constructions given in pp. 179, 22-180, 22 the first (drawing a straight line from a point to a point) and the second (to draw a circle with a line one extreme of which is stationary) are for Proclus examples of postulates (cf. pp. 185, 1-187, 27), whereas the third and the fourth (to construct a one-turn spiral and to construct an equilateral triangle) are problems, because they require complicated constructions (cf. also pp. 180, 23-181, 3). Now Proclus cited Speusippus for the general distinction between the ἀρχαί and the derivative propositions. And we may infer from F 74 that Speusippus called all the ἀρχαὶ ἀξιώματα, just as he called θεωρήματα all derivative knowledge about eternal entities (cf. on F 72 *supra*). Speusippus, then, did not distinguish between axioms and postulates;²⁴⁶ and, if he had known of this distinction, he probably would have denied its validity. Thus for him drawing a line from one point to another by means of the

²⁴⁶ On Aristotle's use of ἀντημα and on the probable origin of this word in mathematics cf. Einarson, *op. cit.*, pp. 46-50. On ἀξιωμα cf. note 248 *infra*.

fluxion of a point would be derivative knowledge, i.e. what he called *θεώρημα*, whereas for Proclus this "construction" is a postulate. Had pp. 179, 22-180, 1 referred to Speusippus, the words *ὡς πρόχειρον λαμβάνει* (sc. *ἡ διάνοια*) καὶ εὐπόριστον (p. 179, 23-24) would be inappropriate; but if the lines in question reflect Proclus' own opinion about the nature of postulates they are readily intelligible. Moreover, we have seen that the whole passage pp. 179, 22-180, 22 is a unified text written from Proclus' own point of view. In it he is trying to illustrate the different nature of postulates, on the one hand, and of demonstration and the complicated constructions it requires, on the other. Furthermore, though Proclus criticizes the definition of line as the fluxion of a point when he comments on Euclid's definition of line (cf. p. 97, 6-7 and 9-17), he uses this very notion and words similar to those he employs in pp. 179, 22-180, 1 in his comments on Euclid's first two postulates (cf. p. 185, 8-19). In short, then, though the conception of line as the fluxion of a point was a doctrine of Speusippus, it is improbable that pp. 179, 22-180, 1 were meant by Proclus to refer to him.²⁴⁷

We must next consider the question, up to what point these fragments reflect Speusippus' own wording and/or terminology. But before doing so a few words are necessary as to who was Proclus' probable source, for it is unlikely that he himself had direct access to Speusippus. From the prominence given to Geminus' opinions concerning the distinction between axioms and postulates, and the question of Euclid's first three postulates (cf. e.g. pp. 182, 5-6; 183, 14-18; 184, 4-5; 185, 6-8), and from the fact that Geminus

²⁴⁷ K. von Fritz, *Archiv für Begriffsgeschichte* 1 (1955), pp. 67, 88, 97-98, would ascribe to Speusippus the construction of the line and of the equilateral triangle in Proclus, pp. 179, 22-180, 1 and 180, 6-8 and 15-19. In this connection he even says that Speusippus seems to have been the originator of "Konstruktionspostulate" and speaks of "Konstruktions-ἀρχαί." His conclusions have been accepted by Kullmann, *Wissenschaft und Methode*, p. 136 and n. 8, although they were rejected by Becker, *ibid.*, 4 (1959), p. 213, whom Á. Szabó, *Anfänge der griechischen Mathematik* (München, 1969), p. 368-369 follows. Since Becker's refutation is rather general, it is necessary to point out the following facts. In *Euclidem*, pp. 179, 22-180, 22 is a unified passage written from Proclus' point of view which can hardly come from Speusippus. It is clear that Speusippus, if he knew of it, would have denied the distinction between axioms and postulates (cf. F 73 and F 74); for him an Euclidean postulate would be derivative knowledge, not an ἀρχή. Finally, the construction of an equilateral triangle is given by Proclus himself as an example of the kind of complicated geometrical construction which is not a postulate.

was one of Proclus' main sources in his *In Euclidem* (cf. Van Pesch, *De Procli Fontibus* [Leiden, 1900], pp. 97-113 and Heath, *op. cit.*, I, pp. 38-42), we may conjecture with good probability that he was Proclus' source for the three passages on Speusippus. Another possibility is Eudemus, to whose history of geometry Proclus seems to have had direct access (cf. Van Pesch, *op. cit.*, pp. 73-75 and Heath, *op. cit.*, I, pp. 35-38), and who singled out Speusippus as the author of the theory Aristotle attacks in *Anal. Post.* 97 A 6-22 (= F 63a), cf. F 63b. Be that as it may, it is ostensible that neither F 72 nor F 74 is a verbatim quotation. F 73 instead may be a verbatim quotation; but, even if it is not, the differences between its vocabulary and the passages of Proclus that precede and follow it make it probable that it is a close paraphrase of Speusippus' text which in part at least reflects his own terminology.

From F 72, F 73 and F 74 we gather that Speusippus used ἀξίωμα of every principle that the mind knows directly,²⁴⁸ and θεωρήμα of all derivative knowledge in the theoretical sciences, that is to say in sciences the objects of which are eternal entities.²⁴⁹ We have also seen that πρόβλημα in the sense of geometrical construction must have been known to him, since he denied that its use is appropriate in sciences the objects of which are eternally existing entities. Any or all of the geometrical examples given in F 72, lines 7-8 may go back to Speusippus. Even if they do not, Speusippus must have mentioned some such constructions, as is shown by the words that

²⁴⁸ On the uses of ἀξίωμα by Aristotle and on the probable origin of this word in the mathematics of this day cf. Einarson, *op. cit.*, pp. 43-46. I cannot, however, agree with his statement (*op. cit.*, p. 43, n. 50) that in *Metaphysics* 1090 A 36 (= F 36) ἀξιώματα "is loosely used for mathematical theorems in general, arithmetical and geometrical." For the probability is that Aristotle's wording there is close to Speusippus' own and that ἀξιώματα more likely means "the principles that the mind apprehends directly" (cf. on F 36 with note 119). This meaning makes better sense in the context both from Aristotle's and from Speusippus' point of view, and makes it unnecessary to postulate such a unique use of ἀξίωμα in Aristotle as that Einarson proposed.

²⁴⁹ Because θεωρήμα in Speusippus is not limited to geometrical proof (cf. notes 241 and 245 *supra* with the corresponding remarks in the text), it is at least misleading to compare his distinction between axioms and theorems to Aristotle's own distinction between the direct knowledge of the principles and that of the derivative propositions, as Zeller, II, i, p. 998, n. 1 *sub finem* does. To be sure, there are similarities between the two, just as between either or both of them with that made by Plato (cf. *Phaedo* 101 E); but the differences between Speusippus' view and those of Plato and Aristotle are no less significant than the similarities between them (cf. also pp. 13-23 *supra*).

follow, where Proclus reports Speusippus' opinion in indirect statement: ἄμεινον οὖν φασὶ λέγειν ὅτι πάντα ταῦτα ἔστι. The following clause, τὰς δὲ γενέσεις αὐτῶν οὐ ποιητικῶς ἀλλὰ γνωστικῶς ὁρῶμεν ὥσανεὶ γιγνόμενα λαμβάνοντες τὰ ἀεὶ ὄντα, probably reflects very closely Speusippus' own wording, cf. Aristotle, *De Caelo* 279 B 33-280 A 2 (= F 61a) ὁμοίως γάρ φασὶ τοῖς τὰ διαγράμματα γράφουσι καὶ σφᾶς εἰρηκέναι περὶ τῆς γενέσεως, οὐχ ὥς γενομένου ποτέ, ἀλλὰ διδασκαλίας χάριν ὥς μᾶλλον γνωρίζοντων, ὥσπερ τὸ διάγραμμα γιγνόμενον θεασαμένους. In fact, only the adverb γνωστικῶς seems to be attested late in Greek literature and may be Proclus' own (cf. LSJ, s.v.); but the use of the adjective γνωστικός by Plato and by Aristotle shows that a similar use of the adverb is possible for Speusippus.

Stenzel, col. 1660, 51-67 has briefly discussed some of the terminology of F 73. His notion that καθόλου "also allgemeines Prinzip des S., das Proklos hier aufs Mathematische einengt" cannot be right. For one thing, the context indicates that it refers simply to the fact that distinction between ἀξιώματα and θεωρήματα is a general one. And Proclus himself, as we saw, cites Speusippus merely for the distinction he made between the ἀρχαί and τὰ μετὰ τὰς ἀρχάς. Moreover, if καθόλου goes back to Speusippus, its use in this context hardly suffices to call it a "general principle." The use of καθόλου by Speusippus is possible, for even Aristotle's use of it as *terminus technicus* for the "universal" has its origin in Plato (cf. Cherniss, I, p. 199 with his quotation of *Meno* 77 A 6-7 and *Republic* 392 D 9-E 1). If διάνοια here goes back to Speusippus, he must have used it in the general sense of "mind" or "intellect" with no special reference to discursive thought as such, since it is clear that the first procedure described in F 73 refers to direct knowledge. As for θήρα, the metaphorical use of hunting in Plato and in earlier Greek authors is well known (cf. C. J. Classen, *Untersuchungen zu Platons Jagdbildern* [Berlin, 1960]). Stenzel cites Plato, *Politicus* 277 B as a parallel for the use of διέξοδος here, which he takes to refer to the procedure of diaeresis.²⁵⁰ But the word does not have such a specific meaning in F 73. Speusippus means that the apprehension of the ἀξιώματα is direct, without any elaborate procedure or excursion. Such a διέξοδος is necessary when we derive our knowledge. But surely when we construct an equilateral triangle we are not making

²⁵⁰ Kullmann, *op. cit.*, p. 137 and Guthrie, *History*, V, p. 467, n. 1 accept Stenzel's interpretation of διέξοδος.

use of diaeresis in Speusippus' sense, and yet we come to know the triangle as it is being constructed (cf. on F 72).²⁵¹ For ἐπαφή in the metaphorical sense of "apprehension" Stenzel refers to the similar use of ἐφάπτεσθαι in Plato (cf. *Phaedo* 79 D and *Symposium* 212 A) and of θιγεῖν and θιγγάνειν in Aristotle (*Metaphysics* 1051 B 24-25, 1072 B 20-21); cf. also *Timaeus* 37 A 5-6 and Cherniss, *Plutarch's Moralia*, XIII, i, p. 215, n. b. If Speusippus had the word, this passage would be the first attestation of its metaphorical use to designate mental "apprehension." Otherwise, the word in this sense occurs in Epicurus, Plotinus, and others (cf. LSJ, s.v. 3b), and Proclus himself so employs it in *In Euclidem*, p. 4, 2. Concerning κατὰ μετὰβασιν it may be said that it means here "step by step" and that it need not refer specifically to the μετὰβασις εἰς ἄλλο γένος (on which cf. p. 64, note 314 *supra*).

F 75

This text has received considerable attention in the scholarly literature particularly in connection with its vocabulary and with the possible influence of Speusippus on Diogenes of Babylon.²⁵² The passage is preceded by one on Plato (VII, 141-144) and followed by another on Xenocrates (VII, 147-149 = frag. 5 [Heinze]), and the whole section in Sextus is concerned with the question of the criterion of knowledge. There is not enough evidence to support the claim of some scholars (cf. e.g. Theiler, *Die Vorbereitung des Neuplatonismus* [Berlin, 1934], p. 55, n. 1; Grilli, *PP* 25 [1970], pp. 407-414; Isnardi Parente, *ibid.* 26 [1971], p. 120) that Sextus'

²⁵¹ In short, the indirect knowledge referred to in the second part of F 73 need not be identified either with diaeresis or with syllogistic inference, though it may include both. *Pace* Kullmann, *op. cit.* in the previous note, the fact that the theory of the syllogism is Aristotle's own is not a reason to deny that Speusippus, as well as many other thinkers including Plato (cf. Shorey, *CP* 19 [1924], pp. 1-19 and *ibid.* 28 [1933], pp. 199-204), may have recognized the validity of syllogistic inferences.

²⁵² Cf. Brandis, II, b, i, p. 9; I. Kemke, *Philodemi De Musica Librorum Quae Exstant* (Lipsiae, 1884), p. VI, n.; Zeller, II, i, pp. 997-998 and 998, n. 1; Frank, *Plato*, pp. 277, 311-312; Stenzel, cols. 1655, 52-1657, 16; A. M. Neubecker, *Die Bewertung der Musik bei Stoikern und Epikureern* (Berlin, 1956), pp. 13 ff., esp. 13-14; L. Richter, *Zur Wissenschaftslehre von der Musik bei Platon und Aristoteles* (Berlin, 1961), pp. 87-88; G. M. Rispoli, *Ricerche sui papiri ercolanesi*, I (Napoli, 1969), pp. 149-159; A. Grilli, *Studi linguistici in onore di V. Pisani*, I (Brescia, 1969), pp. 481-488 and *PP* 25 (1970), pp. 407-416; Isnardi Parente, *PP* 24 (1969), pp. 203-214 and 26 (1971), pp. 120-128; Isnardi Parente², pp. 1061-1063; Guthrie, *History*, V, pp. 466-467.

source for his statement on Speusippus was Antiochus of Ascalon. In fact, it is not even necessarily the case that the οἱ Πλατωνικοὶ who ascribed to Plato the περιληπτικὸς λόγος (VII, 143-144) must be identified with Antiochus; but in any case there is no such ascription in the case of Speusippus, nor in that of Xenocrates either. However that may be, there can be little or no question that Sextus derived his knowledge of Speusippus' doctrine from an intermediate source ²⁵³ and that his report is contaminated by Stoic terminology.

This fragment falls into two distinct parts: first we have a statement concerning the criterion of knowledge both in the case of the νοητά and in that of the αἰσθητά. There follows an explanation of what Speusippus meant by the cognitive power of sensation. In the midst of this second part two examples are given by way of explanation of what he meant by the presence of reason (λόγος) in the ἐπιστημονικὴ αἴσθησις.

Speusippus held that the separately existing numbers and magnitudes are the unchangeable objects of thought (cf. on F 36 and F 72-74). He undertook to make an exhaustive classification of all reality in which were specified the relations of similarity, identity, and difference of each thing in respect to every other thing and to the whole, which classification was to serve as the basis of knowledge and definition (cf. F 6-27; F 63-68; F 70-71). Therefore, there is no reason to question the basic truth of the statement that he distinguished between τὰ νοητά and τὰ αἰσθητά. Obviously Sextus or his source foists on Speusippus the Stoic notion of the "criterion" of knowledge; but, as we shall see in the course of our analysis of this fragment, Speusippus himself must have ascribed to two different faculties our knowledge of the separately existing mathematical, on the one hand, and of the sensibles, on the other. He may or may not have called ἐπιστημονικὸς λόγος the faculty that apprehends the former and ἐπιστημονικὴ αἴσθησις that by means of which we apprehend the latter.²⁵⁴ We may, however, accept it as a fact that for Speusippus it is the mind or reason that knows τὰ νοητά

²⁵³ It is noteworthy that, when Sextus has direct or indirect access to a statement by an ancient philosopher, he likes to quote at least part of the original (n.b. for example his citation of Plato's *Timaeus* in VII, 142 and that of Parmenides in VII, 111, which is followed by an extensive paraphrase and interpretation in VII, 112-114), but that he does not do so either in the case of Speusippus or in that of Xenocrates.

²⁵⁴ Taken by themselves both ἐπιστημονικὸς λόγος and ἐπιστημονικὴ αἴσθησις are expressions that Speusippus may have used. But the former at least has a Stoic coloring, and it is noteworthy that Sextus frequently employs it

and perception that provides the basic knowledge of sensible entities the mind needs to proceed with its task of classifying and defining phenomenal entities (cf. *infra*). Nor is there any reason to question the original Speusippean authorship of the two examples to illustrate the presence of rational factors in cognitive perception, even though some of the words used here also seem to reflect the influence of Stoic and/or Peripatetic vocabulary.

Speusippus thought that the reliability of the information provided by the senses is due to the fact that perception participates in truth according to reason (μεταλαμβάνουσα τῆς κατὰ τὸν λόγον ἀληθείας). He gave the following two examples to illustrate the presence of rational factors in activities which involve the senses of touch and hearing. The flute-player's or the harper's fingers possess an artistic activity ²⁵⁵ which is not primarily brought to perfection by the fingers themselves ²⁵⁶ but is fully developed by practice in reference to reasoning. The musician's faculty of perception possesses an activity which can apprehend both what is harmonious and what is not; this activity, however, is not spontaneous or innate ²⁵⁷ but acquired by the use of ratiocination.

throughout this section even in the case of thinkers who, like Parmenides (cf. VII, 114), could hardly have used it. His use of ἐπιστημονικὴ αἴσθησις here in connection with ἐπιστημονικὸς λόγος casts doubt on the Speusippean authorship of ἐπιστημονικὴ αἴσθησις also. I should think it more likely that Speusippus spoke simply of αἴσθησις.

²⁵⁵ The two uses of ἐνέργεια in this fragment reflect, *pace* Grilli, the Aristotelian conception of "activity" in opposition to ἔξις, and there is no reason to ascribe this to Speusippus.

²⁵⁶ In the controversy between Grilli and Isnardi Parente (cf. note 252) concerning the meaning and the probable authorship of προηγουμένως, I agree with the latter scholar that the context shows it means "primarily" or "directly" and that the word in all probability does not go back to Speusippus. N.b. Sextus' frequent use of it and of the adjective προηγούμενος. As for ἐν αὐτοῖς, it is best taken as instrumental.

²⁵⁷ The word αὐτοφυής and some others in F 75 occur also in two passages of Philodemus' *De Musica* (I, 21 and IV, 1 B 26-2, 15 [pp. 11 and 62-63 [Kemke]]) which refer to Diogenes of Babylon, who is said to have been influenced by Speusippus. It is noteworthy, however, that Diogenes seems to distinguish between an αἴσθησις αὐτοφυής which is irrational and an αἴσθησις ἐπιστημονικὴ which is not. There is no such distinction in Speusippus, to whom, moreover, Sextus ascribes an ἐπιστημονικὴ αἴσθησις which shares in the cognitive experience of reason. The context shows (n.b. the statement at the beginning of this text that the sensibles are known by perception) that Speusippus did not distinguish between two kinds of perceptions but must have thought that perception as such shares in the cognitive power of reason (cf. the text *infra* and on F 76). Be that as it may, there is no reason to think, *pace* Rispoli, that in Philodemus I, 21 αὐτῷ in συνωμολογηθέναι δ' αὐτῷ refers to Speusippus.

Similarly, cognitive perception naturally shares in the cognitive experience derived from reason for the infallible discrimination of its objects.²⁵⁸

We must be careful not to confuse the examples given in comparison with the thing which is being compared to them.²⁵⁹ Speusippus has chosen the player's fingers (touch) and the musician's sense of hearing for the purpose of making it clear that the perfection of the activities of their sense-organs is in each case due to a combination of perception and reasoning. But their activities are the result of training. In perception, too, he sees a combination of sense and reason; but it is perception as such that is for him a source of knowledge *κατὰ τὸν λόγον*.²⁶⁰ That is to say, Speusippus posits perception as an innate faculty capable of unerring discrimination of its objects precisely because it has a natural share in rational cognition. In perception, therefore, we already find some functions requiring abstraction, such as analysis, comparison, etc. (Cf. the similar rôle Aristotle assigns to perception; see especially the last chapter of *Anal. Post.* II, *De Anima* 426 B 8-15, 432 A 16, etc.) And it is intelligible why Speusippus has to postulate such a faculty of perception which, though it shares in rationality, is really autonomous. He rejected the Platonic ideas but nevertheless posited separately existing objects of thought. These are the mathematical numbers and magnitudes (cf. F 28, lines 10-14, F 29a-37; F 50). The mind has direct knowledge of numbers (cf. pp. 21-23 *supra*) and with it also knowledge of the principles of similarity (*ὁμοιότης*) and of *πότερον ταῦτὸν ἢ ἕτερον* (cf. F 63-65, F 67-68, F 70-71). But, unless perception itself were to provide the mind with some kind of infallible knowledge of its objects, Speusippus would have had not only to abandon any attempt to save the knowledge of the sensibles but even the possibility of any kind of knowledge at all. For, given his metaphysical and epistemological presuppositions, how could human beings have any knowledge even of the separately existing mathematical, if their perceptions were totally untrustworthy?

²⁵⁸ τῶν ὑποκειμένων here does not mean "subsisting objects" (Bury).

²⁵⁹ Such a confusion is apparent in Stenzel, col. 1656, 1-4 and perhaps also in the scholars who think that Speusippus has influenced Diogenes of Babylon.

²⁶⁰ It is perhaps noteworthy that in the two examples Sextus uses λογισμός whereas in the case of ἐπιστημονικὴ αἴσθησις he refers to λόγος. For the player's and the musician's abilities are acquired by practice; but a share in λόγος is innate to perception as such.

Moreover, without the information provided by the senses human beings could not meaningfully think and express themselves. There must, then, be an infallible faculty of perception which provides the mind with materials in two ways: (a) from a psychological point of view the psycho-physical experience of sensation is necessary for the development of the higher mental functions in the individual (cf. also on F 76); (b) perception provides the mind with the materials it needs for the exhaustive classification of all reality, which for Speusippus is the basis of our knowledge of phenomena (cf. *supra*). As for perception's sharing in the cognitive experience of reason, we may conjecture that αἰσθησις has a share in the mind's knowledge of number, similarity, identity, and difference. Even the wording ἀπλανής . . . διάγνωσις is significant: perception must unerringly discriminate (i.e. analyse, compare, etc.) its objects. And such a function must be due to the presence of rational factors in it. (Further on this fragment and its relation to Speusippus' epistemology cf. pp. 54-58 *supra*.)

F 76

Though this text looks like a general doxographical report, it is significant that Speusippus' name occurs together with those of Plato and Aristotle in connection with the rôle he assigned to perception. From a psychological and temporal point of view perception provides the mind with the basic information about the sensible world, and the human mind has its origin in perception (cf. on F 75). We know that this report is basically true in the case of Plato (without perception there would be no recollection) and of Aristotle (cf. esp. *Anal. Post.* II, ch. 19), and there is no reason to question its basic reliability in the case of Speusippus (cf. also on F 75 *supra*).

F 77

Though Clement uses indirect discourse, the probability is that he or his source is following Speusippus' wording very closely. In fact, only the word ἀοχλησία seems to be attested later than Speusippus' life-time (in Epicurus and others, cf. LSJ, *s.v.*), but it is neither impossible nor unlikely that Speusippus himself used it to designate the freedom from disturbance at which good and virtuous men aim. Even if he himself did not use ἀοχλησία, however, there is no reason to question the Speusippean origin of the concept of

freedom from disturbance, since he thought that both pain and pleasure must be avoided as evils (cf. F 80a, F 81a, and F 84).

Speusippus' conception of εὐδαιμονία as ἐξίς τέλεια ἐν τοῖς κατὰ φύσιν ἔχουσιν ἢ ἐξίς ἀγαθῶν, where ἀγαθά, as the last sentence also indicates,²⁶¹ means the virtues, is very close to Plato's own doctrine that the happy life coincides with the good life (cf. Tarán, *Academica*, pp. 54-55 with references). It is noteworthy, moreover, that in his use of ἐξίς in connection with εὐδαιμονία Speusippus is also close to Plato and that both come very near to employing ἐξίς in the technical Aristotelian sense of "habit" (cf. esp. *Protagoras* 344 B 8-C 1, *Republic* 435 B 4-7, 509 A 4-5, 618 C 8-D 1, *Philebus* 11 D 4-6). In fact, in Speusippus' ἐξίς τέλεια ἐν τοῖς κατὰ φύσιν ἔχουσιν and in ἐξίς ἀγαθῶν (for which cf. *Republic* 509 A 4-5 ἀλλ' ἔτι μειζόνως τιμητέον τὴν τοῦ ἀγαθοῦ ἐξίν) the meaning of ἐξίς is practically very difficult to distinguish from the technical Aristotelian use of that word (cf. Tarán, *op. cit.*, pp. 360-361). Speusippus, however, obviously did not limit its application—as Aristotle did—to the realm of "practical" virtue, as εὐδαιμονία for him seems to require all the virtues, including wisdom (cf. F 78a-b). When Aristotle in *Eth. Nic.* 1098 B 31-1099 A 7 criticizes those who consider happiness to be ἐξίς (according to him it must be ἐνέργεια), he probably has in mind Plato and particularly Speusippus. For the latter's perfect ἐξίς in natural activities or states (= the virtues) comes closest to saying that happiness is a state or habit in the Aristotelian sense, an interpretation which is corroborated by the occurrence of κατὰστασις (= state or condition, cf. LSJ, s.v. II, 2).

From the definition of happiness in this text and from F 78a-e and F 79, it follows that Speusippus did not regard the other goods, e.g. health and wealth, as indifferent. Like Plato he probably thought that the other goods are not absolute goods but are good only when possessed together with virtue (cf. e.g. *Laws* 631 B 3-632 D 1 with Tarán, *op. cit.*, pp. 20 and 54 with n. 235), and so the other so-called goods may turn out to be either goods or evils (cf. *Laws* 661 A-D, 728 D-729 B).

In thinking that all men desire to be happy Speusippus was

²⁶¹ The sentence εἰεν δ' ἂν αἱ ἀρεταὶ τῆς εὐδαιμονίας ἀπεργαστικάι may be part of the report on Speusippus or may be a comment by Clement or his source. But even if the latter is the case, the words in question are an appropriate interpretation of Speusippus' doctrine as represented in this fragment and in F 78a-e.

expressing a commonplace of Platonism and of contemporary Greek ethics (cf. Plato, *Symposium* 204 E 1-205 A 4, *Philebus* 11 A-D, Xenocrates, frag. 77 [Heinze]), Aristotle, *Eth. Nic.* 1097 A 15-1098 B 8, Shorey, *Univ. of Chicago Studies in Class. Philol.* 1 [1895], pp. 208-212). But only the good or virtuous aim at freedom from disturbance. ἀοχλησία seems to be for Speusippus a necessary but not a sufficient condition of happiness, for he thought that wisdom is the highest virtue (cf. F 78a-b).

F 78a-e

The first four texts—all from Cicero—reflect Antiochus' view about the essential unity of doctrine of the Old Academy and the early Peripatos, especially in ethics (cf. T 15 with comm. *ad loc.*). Antiochus is implicitly referred to in F 78a (cf. *communibus magistris* with Cicero, *Brutus* 315). The point of Cicero's criticism of the doctrine of Speusippus, Xenocrates,²⁶² Aristotle, etc. is the following: He agrees with them that virtue always makes man happy; but contends that, if this is truly so, Speusippus and the rest should not have considered anything but virtue to be good. Nor should they have regarded such things as poverty, obscurity, sickness, etc. as evils; for, if these are truly evils, the wise or virtuous man cannot be always happy (cf. esp. *Tusc. Disp.* V, 10, 28-31 and V, 13, 40 ff.). In short, Cicero's criticism depends on the Stoic notion that all other things besides virtue are indifferent to the wise man. The same criticism of Speusippus and Xenocrates appears in Seneca (cf. F 78e with *Epist. Mor.* 71, 18) and was also apparently Chrysippus' point against these philosophers in F 79.

Speusippus, then, like Plato, thought that there are other goods apart from virtue but that such goods are not good *per se* (cf. on F 77). And from F 78a and b we may infer that for Speusippus the highest virtue is wisdom.

F 79

We gather from this text that Chrysippus attacked Speusippus and Xenocrates (= frag. 92 [Heinze]) because they regarded health and wealth as goods and failed to include them among the things which the Stoics consider "indifferent" (cf. on F 78a-e). Works "On Wealth" are attested both for Speusippus (cf. T 1,

²⁶² Cf. Xenocrates, frags. 84-85, 87-88, and 91 (Heinze).

line 37) and for Xenocrates (Diog. Laert. IV, 11 [I, p. 169, 15]). Plutarch, for his part (cf. *De Comm. Notit.* 1065 A ff.), objects to Chrysippus' inconsistency, since Chrysippus himself maintained that evil is useful and that without evil the good itself would not exist.

F 80a-81b

The discussion of these texts here is concerned only with establishing what is Speusippus' view of the relation between pleasure and the good and what are Aristotle's objections to it. The relation of Speusippus' conception of pleasure to Plato and Aristotle is discussed in pp. 79-83 *supra*.

In *Eth. Nic.* 1152 B 8-1154 B 31 Aristotle first summarily gives the arguments for, and then proceeds to refute, three different views of pleasure *vis-à-vis* the good. These are: (a) that no pleasure is good either in itself or accidentally, since the good and pleasure are not the same; (b) that some pleasures are good but most are bad; (c) that even if all pleasures are good, nevertheless the highest good cannot be pleasure. Speusippus' opinion is more likely to have coincided with (a) rather than with (b) or (c), though perhaps none of these three categories should be taken to represent the view of one or another individual thinker.

In 1153 B 1-7 (= F 80a) Aristotle tries to refute Speusippus, who argued, probably against Eudoxus (cf. note 264), that, from the fact that pain is an evil and that pleasure is the opposite of pain, it is illegitimate to conclude that pleasure is good. For, just as the greater is contrary both to the less and to the equal, so pleasure (an evil) is opposed to pain (another evil) and both to the good.²⁶³ Aristotle for his part says that there is agreement that pain is an evil and must be avoided. He then draws a distinction between two kinds of pain: (i) that which is absolutely bad and (ii) that which is bad because in some respect it is an impediment to us. He contends that the contrary of (i), that is to say of pain which must be avoided *per se* and as an evil, is good, and that therefore pleasure is good. For, according to Aristotle, Speusippus would not say that pleasure is essentially some kind of evil. But this is precisely what Speusippus *did* say, as we gather not only from F 84 but also from Aristotle's

²⁶³ This inference is justified by the context and by the evidence provided by F 81a.

own words in F 80a and F 81a. The sentence οὐ γὰρ ἂν φαίη ὅπερ κακόν τι εἶναι τὴν ἡδονήν certainly does not mean, *pace* A. Kenny, *The Aristotelian Ethics* (Oxford, 1978), p. 237, Aristotle is denying that Speusippus held the doctrine that pleasure is absolutely bad; nor do these words necessarily imply, as Schofield believes (cf. p. 79 f. with notes 379 and 382 *supra*), Aristotle had any evidence that Speusippus did not hold pleasure as such to be an evil. For, to begin with, in *Eth. Nic.* 1173 A 6-8 (= F 81a) Aristotle clearly states that Speusippus considered the opposition of pain and pleasure to be that between two evils (cf. this note *infra*). Moreover, even in F 80a itself Aristotle states that Speusippus' refusal to admit that pleasure as the contrary of pain as absolutely bad *per se* is ἀγαθόν τι was based on the argument that the greater is contrary both to the less and to the equal. This implies that Speusippus must have equated pleasure and pain with the greater and the less, and the good with the equal. (N.b. that for Speusippus equality is indivisible [cf. F 28, lines 45-46 with comm. on F 28, lines 44-46] and that he also considered the good to be indivisible [cf. F 82 with comm. *ad loc.*].) Otherwise Aristotle would hardly have said that Speusippus' argument to deny that pleasure is ἀγαθόν τι fails because Speusippus would not say that pleasure is essentially some kind of evil. Finally, we must infer, the potential οὐ γὰρ ἂν φαίη belongs to the kinds of suppositions Aristotle sometimes ascribes to his adversaries but which the latter would certainly have denied (cf. also p. 51 with note 246 *supra*).

The context of F 81a is as follows. In 1172 B 9-26 Aristotle reports Eudoxus' arguments to establish his thesis that pleasure is identical with the good, one of which was the "argument from the contrary" (1172 B 18-20): οὐχ ἥττον δ' ἦετ' (sc. Εὐδοξος) εἶναι φανερόν ἐκ τοῦ ἐναντίου· τὴν γὰρ λύπην καθ' αὐτὸ πᾶσι φευκτὸν εἶναι, ὁμοίως δὲ τοῦναντίον αἰρετόν. After his summary of Eudoxus' arguments, Aristotle immediately states that the last one (that pleasure when added to any good makes it more worthy of choice, and that it is only by itself that the good can be increased) proves only that pleasure is one of the goods, not that it is the supreme good (1172 B 26-35, where Plato [cf. *Philebus* 60 B-E] is cited). He at once proceeds to give a series of arguments in refutation of those who deny that pleasure is in any sense a good. He first contends that those who deny that that at which all things aim is necessarily good are talking nonsense, since even rational creatures desire the good

(1172 B 35-1173 A 5). He then proceeds to refute Speusippus' own use of the argument ἐκ τοῦ ἐναντίου in his polemic against Eudoxus.²⁶⁴ (That 1173 A 5-13 refers to Speusippus is established by comparing this passage with 1153 B 1-7 = F 80a where Speusippus is named.) According to Aristotle Speusippus denied the cogency of the argument that if pain is an evil pleasure is a good, because evil is opposed to evil and both to the neutral state. The implication is that the neutral state between pain and pleasure, both of which are evil, is good (cf. this note *infra* and also on F 82, F 83, and F 84). Aristotle objects that this argument, though in itself valid, is not applicable to pain and pleasure. For, if both were evils, they should both be avoided, while if they were neutrals, neither should be avoided, or both should equally be avoided. In fact, however, men avoid pain as an evil and choose pleasure as a good; and so the opposition between pain and pleasure is that between an evil and a good. In short, then, all three, Eudoxus, Speusippus, and Aristotle, from their differing points of view made use of the argument ἐκ τοῦ ἐναντίου in trying to establish the relation between pleasure and the good.

The text of *Eth. Nic.* 1173 A 8 and 10-11, though not entirely certain, does not affect the interpretation of Speusippus' doctrine given above. For, whether one reads τῷ μηδενίῳ or τῷ μηδέτερά in 1173 A 8, Speusippus' point according to Aristotle is this: From the fact that pain is an evil one should not infer that pleasure, the contrary of pain, is a good, since pain as an evil is opposed to pleasure as another evil and both are opposed to the neutral state, or to that which is neither pain nor pleasure. Aristotle's argument in 1173 A 10-11 purports to show that the opposition between pain and pleasure is not between two things with the same ethical value; for, whereas pain is avoided, pleasure is an object of choice. But if they were both evils, both would be avoided; whereas if both were

²⁶⁴ Zeller, II, i, p. 1009, n. 4 denies that Speusippus' argument ἐκ τοῦ ἐναντίου was directed against Eudoxus and thinks that the butt of his attack was Aristippus. But though Speusippus wrote an "Aristippus" (cf. T 1, lines 36 and 50), and though it is quite likely that he attacked that philosopher's extreme hedonism, the context in Aristotle and the very fact that Eudoxus himself made use of the argument ἐκ τοῦ ἐναντίου suggest that Speusippus must have turned that argument against Eudoxus just as Aristotle does against Speusippus. It is noteworthy, moreover, that Speusippus also wrote a Περὶ ἡδονῆς α' (cf. T 1, line 38) which there is no reason to identify with the "Aristippus."

neutrals, neither should be avoided or both should be equally avoided. (The possibility that both may be good Aristotle does not consider, since it was commonly admitted, also by Speusippus, that pain is an evil.) And so Aristotle believes he has shown that pain and pleasure are not opposed as two evils and that therefore Speusippus has been confuted (cf. further pp. 81-83 *supra*). It is only because they have failed to see that 1173 A 10-11 is merely Aristotle's attempt to refute Speusippus that Gauthier-Jolif, *Aristote, L'Éthique à Nicomaque*, pp. 823-824 excise ἄμφοι in 1173 A 8 and read τὸ μᾶλλον for τῶν μᾶλλον in 1173 A 11. Schofield, *MH* 28 (1971), pp. 17-18, for his part, falls into the same kind of error (cf. *op. cit.*, p. 17, n. 51) and maintains "that Speusippus did not make it clear in his argument whether he supposed pleasure a bad thing or not." However, there is no reason to question Aristotle's report that Speusippus opposed Eudoxus' use of the argument from the contrary. Speusippus' point about the greater being opposed to the less and to the equal was to deny Eudoxus' inference that pleasure is the good. As reported by Aristotle in F 81a Speusippus is not concerned, *pace* Schofield, with the contrary of bad but with the nature of the opposition between pain and pleasure. It is ἡ λύπη and τὴν ἡδονήν that are the subjects in 1173 A 7, and so it is pain and pleasure which *as evils* are opposed to the neutral state (=the good). Cf. also F 80d and F 84 and, against other aspects of Schofield's interpretation, p. 80, note 382 *supra*.

There follows (1173 A 13-15 = lines 7-9) an argument to the effect that, from the fact that pleasure is not a quality, it is illegitimate to conclude that it is not a good, because neither are the activities of virtue qualities, nor is happiness a quality either (on this cf. p. 80, note 382 *supra*).

In the passage immediately after the one just mentioned Aristotle first states (1173 A 15-17 = lines 9-11) and then refutes (1173 A 17-28 = lines 11-20) another argument, the purpose of which was presumably to show that pleasure is neither identical with the good nor a good:²⁶⁵ The good is determinate (τὸ μὲν ἀγαθὸν ὀρίσθαι) while pleasure is indeterminate (ἀόριστον) because it admits of "the more and the less" (τὸ μᾶλλον καὶ τὸ ἧττον) i.e. it admits of

²⁶⁵ The argument itself shows that those who put it forward denied both possibilities. And, if the argument was Speusippus' own, the evidence of the first part of F 81a and F 84 also show that he regarded pleasure as an evil.

degrees. Cherniss, I, pp. 37-38 convincingly argues that, though this is reminiscent of Plato's *Philebus* (cf. 27 E-28 A, 31 A, 65 D), Aristotle is here referring to Speusippus in particular. For from F 80a we learn that Speusippus cited the opposition of the greater (τὸ μείζον) to both the less and the equal (τῷ ἐλάττονι καὶ τῷ ἴσῳ) as an analogy to the opposition of pleasure to both pain and the good. And so it is legitimate to infer that Speusippus equated the good with τὸ ἴσον and pain and pleasure with τὸ μείζον καὶ τὸ ἐλάττον. Moreover, we know that he connected τὸ ἴσον with τὸ ἀδιαίρετον (cf. F 28, lines 45-46: ἄσχιστον γὰρ αἰεὶ καὶ ἐνοειδὲς τὸ ἴσον) and that he used ἀόριστον (= τὸ μείζον καὶ τὸ ἐλάττον οἱ τὸ μᾶλλον καὶ τὸ ἥττον) of the imperfect (ἀτελής: cf. Aristotle, *Metaphysics* 1092 A 13 = F 43). In fact, Speusippus' doctrine of the good as the middle between two extreme evils is very close to Aristotle's own doctrine of virtue as a mean (cf. on F 83). And, though the anonymous commentator (cf. F 80d) may not have had any knowledge of Speusippus' doctrine independent of Aristotle's text, his words are worthy of being quoted here: ἔλεγεν ὁ Σπεύσιππος ὅτι ὥς τὸ μείζον ἀντίκειται τῷ ἐλάττονι καὶ τῷ ἴσῳ, καὶ τὰ μὲν ἄκρα, ἥτοι τὸ μείζον καὶ τὸ ἐλάττον, ἐστὶν κακά, τὸ δὲ μέσον, ἥτοι τὸ ἴσον ἀγαθόν ἐστιν, οὕτως καὶ ἡ ἡδονὴ ἀντίκειται τῇ ἀλυπία καὶ τῇ λύπῃ, καὶ τὰ μὲν ἄκρα, ἥτοι ἡ λύπη καὶ ἡ ἡδονή, εἰσὶ κακά, τὸ δὲ μέσον, ἥτοι ἡ ἀλυπία, ἀγαθόν ἐστιν. In short, the middle state between pain and pleasure, ἀλυπία, is good and is the necessary condition of εὐδαιμονία which in F 77 is called ἀοχλησία.

Aristotle's refutation of the view described in lines 9-11 is as follows: if it is from the feeling of pleasure that the authors of this argument judge, one may state that also justice and the other virtues admit of degrees. But if they base the argument on the pleasures, they are not stating the reason (sc. why some pleasures are bad), if indeed some pleasures are unmixed while others are mixed. Pleasure, however, is like health, which, though determinate (ὠρισμένη), admits of degrees. (On the validity of Aristotle's criticisms of Speusippus in F 80a and F 81a cf. pp. 82-83 *supra*.)

The commentators do not seem to have any independent knowledge of Speusippus' doctrine. In the two anonymous commentaries (F 80c and F 80d), in the scholion in *Codex Parisinus Graecus* 1854 (F 80e), and in Michael of Ephesus (F 81b) we find correct paraphrases of Aristotle's text. It is clear, however, that Aspasius (F 80b) completely misunderstood Aristotle, as he has Speusippus "proving" that pleasure is good. In his case, therefore, I have quoted

only a few sentences which make his error evident. Concerning F 80c, we must add that this commentary is really anonymous, cf. L. Cohn, *Berliner Philologische Wochenschrift* 9 (1889), cols. 1419-1420 and D. M. Nicol, "A Paraphrase of the *Nicomachean Ethics* Attributed to the Emperor John VI Cantacuzene," *Byzantinoslavica* 29 (1968), pp. 1-16.

F 82

In ch. 3 of *Anal. Post.* II Aristotle shows that it is impossible for the same thing to be the object both of demonstration and of definition. In ch. 4 he maintains that the definition cannot be demonstrated because the essential nature would have to appear in the middle term, and so the alleged demonstration would really beg the question. In ch. 5 he argues that the definition cannot be demonstrated by diaeresis because diaeresis itself assumes the essential nature. In ch. 6 he shows that also two attempts to demonstrate the definition by means of assumptions (ἐξ ὑποθέσεως) involve a *petitio* in as much as in both the definition is necessarily assumed and appears in the middle term: He first (92 A 6-19) refutes a method the adherents of which would claim that by the correct use of the two basic assumptions of diaeresis a demonstration of the definition is obtained (cf. Cherniss, I, pp. 34-36), and he then rejects the attempt to demonstrate a definition by assuming the definition of its contrary (92 A 20-27 = F 82).

From the fact that in this last case the assumption given by way of example is that the essential nature of evil is to be divisible (τὸ διαίρετόν εἶναι) Cherniss, I, pp. 36-38 (cf. also Ross, *Aristotle's Analytics*, pp. 623-624) has plausibly inferred that Aristotle is referring to Speusippus, who did equate the good with τὸ ἴσον (= ἀδιαίρετον) and pleasure and pain as evils with ἀόριστον (cf. on F 80a-81b). According to Aristotle this procedure, too, begs the question because it assumes the definition as a premise. For, if one grants that the definition of evil is to be divisible and that the definition of a contrary (when there is one) is the contrary of its own definition, then, since good and evil, and indivisible and divisible are contraries, it follows that the definition of good is "to be indivisible." But there is a *petitio*, since one is assuming the definition of the essential form. If it is argued that the definable form which is assumed is different ("ἕτερον μέντοι") from the definition one is trying to demonstrate, the answer is as follows: Also in

demonstrations we assume that one thing is predicated of another; but the term assumed to be predicable of the minor term is not the same as the major, nor is it a term which has the same definition as the major term, or which is correlative with it. (On the text and the grammar of 92 A 20-27 cf. Ross' note *ad loc.* with his reference to Bonitz.) Aristotle's argument will become clearer if we write down its premises and conclusion as follows:

- (a) The definition of a contrary is the contrary of its own definition.
- (b) Evil is contrary to good.
- (c) Divisible is contrary of indivisible.
- (d) Evil is divisible (definition assumed).
- (e) Good is indivisible (conclusion).

Now it is clear that, given (a), (b), and (c), when we assume the definition (d) "evil is divisible," we are already assuming the essential nature of good, since we already know that good and evil are correlatives, and so we also know that the definition of good will be contrary to the definition of evil.

It appears, then, that in attempting either to demonstrate or to establish the definition of the good as "to be indivisible" Speusippus made use of the argument ἐκ τοῦ ἐναντίου, the kind of argument he had also used in his polemic against Eudoxus' attempt to demonstrate that pleasure is the good (cf. on F 80a-81b). Aristotle's objection to employing this argument in defining correlative terms such as good and evil appears also in *Topics* 147 B 17-25, in a context where he himself illustrates the use of the argument ἐκ τοῦ ἐναντίου as a means of overthrowing definitions (cf. *Topics* 147 A 29-B 25). On the validity of Aristotle's argument and on the question whether or not Speusippus tried to demonstrate the definition of the good as τὸ ἀδιαίρετον εἶναι, cf. pp. 83-84 *supra*.

F 83

The text of this fragment is in some places uncertain, and Guthrie, *History*, V, p. 463, n. 2, who pronounces it "corrupt and obscure," does not even attempt to interpret it. I believe, however, that it is possible to constitute an acceptable text out of the readings preserved in the MSS and that one can arrive at a probable interpretation by taking into consideration the context in Theophrastus and the evidence we elsewhere have about Speusippus' doctrine. In fact, the text printed by Ross and Fobes is likely to be correct. Ross, in his notes on this passage, provides the basis for establishing

such an interpretation of F 83, though he himself unfortunately adopted the then fashionable cosmological interpretation of Theophrastus' remarks in lines 3-5 (= 11 A 22-25).

The cosmological interpretation, already put forward by Ravaisson, pp. 44-45 and by Usener, *Kl. Schr.*, I, pp. 110-111 became fashionable perhaps because of the authority of Zeller, II, i, p. 1000 and n. 3, who himself adopted it. He took this fragment to refer to the world-soul as a power located in the middle and in the circumference of the universe (n.b. his proposal to read $\tau\acute{\alpha}\ \tau'\ \acute{\alpha}\chi\rho\alpha\ \acute{\epsilon}\chi\alpha\tau\acute{\epsilon}\rho\omega\theta\iota$ in line 5 = 11 A 24-25). Speusippus would have combined the conception of the world-soul in Plato's *Timaeus* (cf. on F 54a-b) with the Pythagorean doctrine of a central fire. Since Zeller's proposed emendation is at the very least unnecessary, and since in any case it is not easy to see how the notion of a central fire can be combined with that of the Platonic world-soul, later critics rejected part of his interpretation. Thus Frank, *Plato*, pp. 207 ff., 252, 286 contended that $\tau\omicron\ \tau\acute{\epsilon}\mu\iota\omicron\nu$ in Speusippus is the central fire and took this text as evidence that Speusippus had adopted the Philolaic system. He found corroborative evidence for this view in Aristotle, *De Caelo* 293 A 27-B 1. (Frank's interpretation was accepted, among others, by Ross in his note on 11 A 23-25, by Tricot, *Théophraste, La Métaphysique*, p. 41, n. 2, and by Elders, *Aristotle's Theory of the One* [Assen, 1961], pp. 10 ff.) This passage of Aristotle's, however, does *not* say that any others, besides those Pythagoreans who did so, adopted the doctrine of a central fire. It means that many others, too, if they argued from their principles (as the Pythagoreans did) and not from the phenomena, would be forced to admit that the earth cannot occupy the center of the universe. In short, the statement in question is merely hypothetical (cf. Tarán, *Academica*, pp. 106-107 with notes 478-481 and the references there given). Concerning F 83 itself, one may say that there is nothing peculiarly astronomical either in the context where Speusippus' opinion is cited or in the doctrine here ascribed to him.

Merlan, *From Platonism*², pp. 110, 115, 140, for his part, advances a totally different interpretation of this text which, he thinks, refers to the whole Speusippean universe of $\acute{\alpha}\rho\chi\alpha\iota$ and $\omicron\upsilon\sigma\acute{\iota}\alpha\iota$. On the basis of the Arabic translation of Theophrastus' *Metaphysics*,²⁶⁶

²⁶⁶ Cf. D. S. Margoliouth, *Journal of the Royal Asiatic Society* (1892), pp. 192-201. It seems that this Arabic translation was made directly from the Greek rather than from the Syriac (cf. Margoliouth, *op. cit.*, p. 192). Our discussion of it, however, is independent of this issue.

he proposes to read ἀμαθεστάτου <ἀν> εἴη· καὶ γὰρ κτλ. in line 3 (= 11 A 21-22) and contends that in the first part of F 83 (lines 1-3 = 11 A 18-22) Theophrastus rejects a doctrine that regards evil as something positive. This is not Speusippus' opinion but that of Philip of Opus or "any other Zoroastrianizing Platonist" (Merlan, *op. cit.*, p. 115). According to Merlan it is only in lines 3-5 (= 11 A 22-26) that Theophrastus refers to and rejects Speusippus' doctrine. His translation of this passage is: "Speusippus makes the worthy a rare thing—he places it around the middle χώρα; all the rest are the principles (ἄκρα) and [what surrounds the middle χώρα] on both sides." He believes that the middle χώρα refers not to the center of the universe but to the center of the spheres of being: "the ἄκρα are the neutral principles; they, together with the last sphere of being, surround the center, thus forming the pattern: neutral-good-evil . . . The outermost spheres of the universe are the One (containing no good at all) and the last sphere (or spheres) of being containing evil; then the good is confined to the central sphere of being or the center of the universe—that is why it is rare" (Merlan, *op. cit.*, p. 110). (This interpretation has been accepted, among others, by Reale, *Teofrasto e la sua aporetica metafisica*, pp. 74, 75, and especially 204 with nn. 14-15, though he accepts the text of Ross-Fobes.) Merlan's interpretation cannot be right for the following reasons. To begin with, since Speusippus obviously admitted that men can be good or evil (cf. F 77-81), he could hardly have placed good and evil in different spheres of being. (For this reason, among others, it ought to be clear that this fragment cannot refer to the whole Speusippean universe of several kinds of substances; and so ἄκρα καὶ ἐκατέρωθεν, *pace* Krämer in *Zetesis*, p. 210 with n. 20, does not mean "the things which are neutral and those which are evil." In fact Krämer's interpretation in *Zetesis* is incompatible with his own correct remark against Merlan in *Ursprung*, p. 214, n. 57.) Secondly, even with Merlan's reading of line 3, it is impossible to find in this text the doctrine he spins out of it, since καὶ ἐκατέρωθεν cannot by itself refer both to the principles *and* to a thing (or things) different from the ἄκρα; nor can it refer to something different from the ἄκρα; and so ἄκρα *here* cannot at all mean "principles." Otherwise, Theophrastus would be ascribing to Speusippus the absurd notion that apart from τὸ τίμιον everything else is a principle. Finally, it is unlikely that Merlan's reading of line 3 is right. I transcribe Margoliouth's rendering of the Arabic

translation of F 83: "And in general the good is little and in few things; and the bad in large number. *And the fact that this only exceeds limit is like what is in the nature of the extremity of folly.* For those who talked of substance as a whole like Speusippus made the honorable in the middle place small and rare, whereas the extremes on either side of the middle *are according to them as they should be*" (Margoliouth, *op. cit.*, p. 194; italics are mine). If this is an accurate version of the Arabic text (it seems that Merlan relied on the English translation, not on the Arabic itself), it is clear that the Arabic translator either had a corrupt text in front of him and/or that he misunderstood Theophrastus. For the italicized words show that in two different places he has conflated expressions which are syntactically differentiated in the Greek and has thus misrepresented Theophrastus' own opinions.²⁶⁷ This being so, it seems hypercritical to reject Sylburg's plausible conjecture εἰς ἄρ γάρ for most MSS' εἰ καὶ γάρ (the corruption being due to iotacism and wrong separation of words) on the basis of a translation of a text which, as Merlan himself recognizes, was not itself free from corruption, and to do so when the translation is into a language so different from Greek as Arabic is. For all we know, the translator may well have had ΕΙΚΗΓΑΡ in his Greek text, which he either misunderstood or chose not to render into Arabic.²⁶⁸ Finally, even Merlan's text does not support his notion that in F 83 Theophrastus is refuting two different doctrines, and the interpretation of this fragment adopted here is compatible with Merlan's text.

If we first examine what Theophrastus specifically ascribed to Speusippus—σπάνιον τι τὸ τίμιον ποιεῖ τὸ περὶ τὴν τοῦ μέσου χώραν, τὰ δ' ἄκρα καὶ ἐκατέρωθεν—, one must conclude that it is more probable than not that τὰ δ' is adversative to what precedes: "Speusippus makes the honorable something rare which occupies the middle place, but the rest he makes extremes and to each side of the center." τὸ τίμιον here is equivalent to τὸ ἀγαθόν in line 1 (= 11 A 19); and the ἄκρα to each side of "the honorable" must be the extremes of evil to each side of the good. And so in lines 4-5

²⁶⁷ This is not infrequent, as may be seen even from a comparison of the selected readings given by Margoliouth with the Greek text.

²⁶⁸ Professor Bernard Goldstein, who has kindly corroborated for me the accuracy of Margoliouth's translation of F 83, informs me that it is impossible to tell whether or not the Arabic translator had εἰς ἄρ in the Greek text from which he made the translation.

(= 11 A 23-25) Theophrastus is probably referring to Speusippus' doctrine of the good or virtue as the middle between two extreme evils (cf. on F 80a-81b). Cherniss, I, p. 559 was the first to propose this interpretation, rightly calling attention to the fact that Aristotle himself uses the same words in connection with his doctrine of "practical" or "ethical" virtue as a mean (cf. *Eth. Nic.* 1109 A 20-B 26, where he says that goodness is *σπάνιον* because it is a μέσον of ἄκρα).²⁶⁹

It still remains to explain why Theophrastus relates this ethical opinion of Speusippus to the whole of existence or reality (οἱ περὶ τῆς ὅλης οὐσίας λέγοντες). Pace Merlan, it is clear that in the two parts of this text Theophrastus, from his point of view, is refuting one and the same doctrine.²⁷⁰ This follows not merely from the likelihood that εἰκῆ γάρ is the correct reading but also from the occurrence of σπάνιον τι both at the beginning of this fragment and immediately after Speusippus' name. In the passage immediately preceding F 83 Theophrastus pointed out the limits to purposiveness (i.e. goodness) in the universe (cf. 11 A 1-18 with Ross' notes on pp. 72-74). In 11 A 18-26 (= F 83) he is eager to point out the essential difference between his own doctrine of negative evil and that asserting that the good is a rare thing, which would imply that evil as such (i.e. positive evil) predominates in the universe. Therefore, in F 83 Theophrastus maintains that in general (τὸ δ' ὅλον) the universe *is* good (cf. ἀμαθεστάτου and τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν ὄντα with Ross' note on 11 A 25). What Theophrastus rejects in the first part of this fragment is the notion that the good is rare and found only in few things but that evil is a great multitude, if evil is meant to consist not merely in indefiniteness and by way of matter (οἶον ὅλης εἶδει, on which cf. Ross' note on 11 A 20), as *is* the case with the things of nature. Now the doctrine of negative evil as due to the limitation that formless matter imposes on god, i.e. evil as the incomplete information of matter, which here is the basis of his rejection of the rival theory under consideration, is Theophras-

²⁶⁹ Isnardi Parente, p. 909 (in a work the main purpose of which is to bring up to date the bibliography found in Zeller) appears not to be aware of this interpretation. Moreover, she wrongly says that Cherniss, *Crit. Pres. Philos.*, p. 394 adopts the cosmological interpretation, which Cherniss there rejects.

²⁷⁰ To this extent I disagree with the interpretation of Regenbogen, *RE, Suppl.* 7 (1940), col. 1392 who thinks that the first part of F 83 refers only to Theophrastus' own doctrine and that it has no polemical intent.

tus' own doctrine and also that of Aristotle himself (cf. p. 85 with note 405 *supra* and the references there given). Speusippus, on the other hand, asserted that the good is not to be found among the principles but is the result of a process of natural development, and so that it is not to be found, either, among the separately existing numbers and magnitudes (cf. F 42-47 with comm.). Since in addition to this he spoke of the good as a μέσον between two extremes which are evils (cf. F 80a-81b), Theophrastus infers that he made the good something rare in the universe as a whole. The fact that Speusippus obviously regarded some things, e.g. numbers and magnitudes, as neither good nor evil is disregarded by Theophrastus. He probably thought, as we know Aristotle did (cf. on F 30, F 42a, F 43, with comm.), that, if the highest principle is neither the good nor even a good, goodness would indeed be σπάνιον τι. In short, then, in F 83 Theophrastus is refuting his own inference from Speusippus' theory of good and evil; but the inference is justified from his point of view. For Speusippus' conception of the principles is incompatible with the Aristotelian doctrine of the unmoved mover as the highest good (cf. the whole commentary on F 30) and of evil as purely negative. Cf. further pp. 41-44, 51-52, and 84-85 *supra*.

F 84

This statement of Gellius is a correct though simplified version of Speusippus' doctrine of pleasure and pain as two opposite evils which are extremes and as such opposed to the good as middle (cf. on F 80a-81b). The extension of this doctrine to the whole of the Old Academy is of course an exaggeration on the part of Gellius or his source, for Plato's conception of pleasure and pain (to mention only one instance) is certainly incompatible with Gellius' statement.

F 85

This passage occurs in Vettius Praetextatus' speech in answer to Avienus' question at the beginning of ch. 17 as to why the sun is worshipped under so many different names, Apollo, Liber, etc. Ch. 17 discusses the meaning of the name Apollo. If Macrobius' report is trustworthy (and his or his source's misuse of Plato, *Cratylus* 405 B-406 A suggests caution), Speusippus gave an etymological explanation of the name Apollo in connection with his identification with the sun: The power of the sun consists of many fires, as if the fire of the sun were the product of many kinds of fires

(ὥς ἀπὸ πολλῶν οὐσιῶν πυρὸς αὐτοῦ [sc. ἡλίου] συνεστῶτος). It is of course quite likely that Speusippus believed in the fiery constitution of the sun; but we cannot be sure that he seriously considered this to be the true etymology of "Apollo."

The scholarly controversy concerning the question of Macrobius' sources for I, 17-23 is summarized by J. Flamant, *Macrobe et le Néo-Platonisme Latin à la fin du IV^e siècle* (Leiden, 1977), pp. 655-668, to which should be added R. Münzel, *De Apollodori ΠΕΠΙ ΘΕΩΝ Libris* (Bonnae, 1883), pp. 14-24 and C. Reinhardt, *De Graecorum Theologia Capita Duo* (Berolini, 1910), pp. 103-106. Münzel argues that Macrobius' ultimate source is Apollodorus' Περὶ θεῶν. Reinhardt maintains that Macrobius' knowledge of Apollodorus' work came from Porphyry, not from Iamblichus, as Wissowa and others thought. To this extent Flamant and other recent critics such as Courcelle and Altheim agree. There is disagreement, however, as to which work or works of Porphyry's Macrobius used, as to what extent he used additional sources, such as Cornelius Labeon and Marius Victorinus, and as to what extent contamination is due to Macrobius himself.

F 86

There is no reason to question the authenticity of this epigram which in all probability was transmitted by Philochorus (cf. on T 2, lines 3-6; for variant readings cf. crit. app. on T 2, lines 7-10). The style is simple and rather uninspired; and line 1 looks awkward and forced despite the attempt at originality suggested by the alliteration and the interlocking pattern of accusatives and datives. In the pentameter the assonance in —ων at the end of each hemistich is meant to emphasize λογίων τελῶν, which probably means "wisdom." And so it is possible that the divine Muses of line 1 are connected with, or represent, philosophy. For Plato's substitution of Μοῦσα and μουσική for philosophy cf. Tarán, *Academica*, p. 27, n. 113 with references.

F 87a-b

The Speusippean authorship of F 87b is accepted by a majority of modern scholars, including F. Osann, *Beiträge zur griechischen und römischen Literaturgeschichte*, I (Darmstadt, 1835), pp. 307 ff.; G. Kaibel, *Epigrammata Graeca ex Lapidibus Conlecta* (Berlin and Frankfurt, 1878, 1879), p. 19, n. on Nr. 56; T. Preger, *Inscriptiones*

Graecae Metricae (Lipsiae, 1891), pp. 9-11; T. Bergk, *Poetae Lyrici Graeci*, II⁴ (Lipsiae, 1882), p. 329 f.; Lang, p. 86; J. Geffcken, *Griechische Epigramme* (Heidelberg, 1916), p. 52, on Nr. 141b; J. A. Notopoulos, "Plato's Epitaph," *AJP* 63 (1942), pp. 272-293; W. Peek, *Griechische Vers-Inschriften*. Band I: *Grab-Epigramme* (Berlin, 1955), pp. 526-527, Nr. 1756. The longest and most recent discussion is that by Notopoulos. He, developing some of the arguments first advanced by Osann and by Preger and adding a few of his own, has tried to show that F 87b was the original epitaph inscribed on Plato's tomb and that it was probably written by Speusippus. The evidence he adduces is of two kinds, external and internal. By the former Notopoulos means that the attestation of F 87b with the ascription of the epitaph to Speusippus is more likely to be right than that F 87a be the original anonymous epigram out of which F 87b was developed. He then discusses the language, motifs, and contents of the distich preserved by Planudes and contends that it was written by a Platonic philosopher in the fourth century B.C., in all probability by Speusippus.

To begin with, the last mentioned kind of argument is seldom decisive in questions of positive ascription; the more so in this instance, since only one epigram of a completely different nature is known to have been written by Speusippus (cf. F 86).²⁷¹ One may readily admit that there is in F 87b nothing incompatible with a fourth century B.C. date. But this distich could also have been written much later, as we shall see. Nor is there in the epitaph anything so specifically philosophic that necessitates the inference that a philosopher wrote it. The issue, then, must be decided on the basis of the external evidence alone. It is on that ground that the Speusippean authorship seems to be highly improbable.

Notopoulos' basic argument in its favor is as follows. In Planudes III^b 26, 7 and in the Arabic life of Plato by Ibn al-Ḳiṭṭī (1172-1248 A.D.), which Notopoulos, following Roeper, wrongly ascribes to Ḥunain ibn Ishāq (tenth century A.D.),²⁷² and which probably

²⁷¹ In the last part of his paper Notopoulos cites whatever evidence about Speusippus he knows in order to support his ascription of F 87b to him. Unfortunately, he does not seem to have been aware of the existence of Speusippus' epigram in dedication of the Charites.

²⁷² In fact Notopoulos had not seen T. Roeper's *Lectiones Abulpharagianae Alterae: De Honaini Vita Platonis* but relied on Preger's summary of Roeper's work and used a translation of the text of Bar-Hebraeus' *Chronicon* rather than al-Ḳiṭṭī's biography of Plato. In Roeper's work (pp. 9-22) one finds an

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p. 451, last line: for “tenth century A.D.” read “ninth century A.D.”

goes ultimately back, in part at least, to Porphyry's life of Plato or to another Greek source different from Diogenes Laertius,²⁷³ we find an epitaph in one distich only. On the other hand, Diogenes Laertius, the Palatine Anthology, and Planudes III^a 28, 2 all give a four line epitaph (= F 87a). We know that in this last case the Palatine Anthology and Planudes go ultimately back to Cephalas' anthology, and that Cephalas, who was Πρωτοπαπᾶς of the palace at Constantinople in 917 A.D., drew the epigrams now found in *Anthol. Pal.* VII, 60-62 and 83-133 from a source which got them from Diogenes Laertius.²⁷⁴ Hence, the ultimate source of F 87a, of its readings, and of its anonymous character is Diogenes Laertius. But in Planudes III^b 26, 7 the epitaph occurs independently of the group of epigrams on Plato's tomb as they appear in Diogenes Laertius and/or in the *Anthol. Pal.* and in the *Anthol. Plan.* III^a. Moreover, the epigram as it appears in *Anthol. Plan.* III^b presents some readings different from those in our three sources for F 87a: σῶμα and γαῖα have exchanged places; κατέχει appears instead of κρύπτει and ἰσόθεον or ἰσοθέων instead of ἀθάνατον or ἀθανάτων. "Finally the epitaph shows its independent source in the authorship. Planudes III^b 26, 7 gives Speusippus as its author whereas all the other sources, including Planudes III^a 28, 2 give it as *adespoton*. The existence, therefore, of the second epitaph in the Planudean Anthology as *adespoton*, enlarged by a second distich, as part of the general group of Plato epitaphs also found in Diogenes Laertius

annotated Latin translation of al-Kiftī's life of Plato, both in the version given by M. Casiri, *Bibliotheca Arabico-Hispana* I (Madrid, 1760), pp. 301 f. and in a longer recension, as well as of Bar-Hebraeus' statements on Plato. On Roeper's mistaken ascription of al-Kiftī's life of Plato to Hunain, cf. D. A. Khvol'son, *Die Ssabier und der Ssabismus*, I (St. Petersburg, 1856), p. 787, n. 2 and M. Steinschneider, *Al-Farabi: Des arabischen Philosophen Leben und Schriften* (*Mémoires de L'Académie impériale des sciences de St.-Petersburg*, VII^e série. Tome XIII, No. 4, St.-Petersburg, 1869), p. 186, n. 1.

²⁷³ In his life of Plato al-Kiftī cites Theon (probably Theon of Smyrna). He is dependent also on another, unknown Greek source, which may have been Porphyry's life of Plato, for Porphyry's *History of Philosophy* was available to the Arabs in a Syriac translation (cf. A. Müller, *Die griechischen Philosophen in der arabischen Überlieferung* [Halle, 1873], pp. 5, 25, 30, n. 1, and 57, n. 46), whereas they do not seem to have known Diogenes Laertius (cf. Müller, *op. cit.*, p. 42).

²⁷⁴ Cf. R. Weisshäupl, *Die Grabgedichte der griechischen Anthologie* (*Abhandl. d. Arch. Sem. d. Univ. Wien*, 7, 1899), pp. 37-38; H. Stadtmüller, *Anthologia Graeca Epigrammatum Palatina cum Planudea*, II, i (Lipsiae, 1899), pp. LXIII-LXIV; Notopoulos, *op. cit.*, pp. 277-280.

and the Palatine Anthology, and the existence of this same epitaph under the name of Speusippus, independent and different in text, position, and size, show a source which ultimately contained the Speusippus epitaph alone, before its later inclusion with other epitaphs" (Notopoulos, *op. cit.*, p. 274).

Three things, however, have become confused in Notopoulos' argument: ²⁷⁵ (a) whether F 87b is likely to be earlier than F 87a; (b) whether F 87b is likely to be the epigram actually inscribed on Plato's tomb; (c) whether F 87b is likely to have been written by Speusippus. If one succeeded in proving or in making it seem probable that F 87b was written by Speusippus, then (a) should certainly be answered affirmatively and, with good probability, also (b). But if Notopoulos had proved his case concerning (a), it does not follow that (b) and (c) must receive affirmative answers. And, even if he had established his interpretation in the case of both (a) and (b), he still has not proved that Speusippus is likely to be the author of F 87b. As it is, I submit that Notopoulos has failed to prove his case concerning all the three questions mentioned above, that (c) is almost certainly to be answered in the negative, that it is unlikely that either F 87a or F 87b is the original epigram inscribed on Plato's tomb, and that the extant evidence does not suffice to decide question (a).

We must first discuss the possible Speusippean authorship of F 87b. In this connection Notopoulos has kept a discrete silence concerning the implications of two sources. For in the Arabic life of Plato, and so presumably in its ultimate Greek source which was not Diogenes Laertius, the epigram is anonymous. And it is anonymous also in E. Now E is the Sylloge (Euphemiana) made for Euphemius, who lived in the reign of Leo the Great (886-911 A.D.) and who was practically a contemporary of Cephala.²⁷⁶ Therefore, the likelihood is that the two-line epigram appeared in Cephala's anthology. Yet it does not necessarily follow that the ascription to Speusippus was also in Cephala, since in E the distich is anony-

²⁷⁵ The question of the priority of either F 87a or F 87b to the first epitaph on Plato in Diogenes Laertius (III, 43) is discussed in the text *infra*.

²⁷⁶ On the Sylloge Euphemiana cf. Stadtmüller, *op. cit.*, pp. XXIX-XXX and A. S. F. Gow and D. L. Page, *The Greek Anthology. Hellenistic Epigrams I* (Cambridge, 1965), p. xli. The fact that F 87b is also preserved in Ir. 105 is of no consequence, since the sylloge in *Codex Matritensis* XXIV was made by Constantine Lascaris, who frequently took his epigrams from Planudes (cf. Stadtmüller, *op. cit.*, pp. LXIV-LXVI).

mous, while the Palatine Anthology has omitted it altogether. Hence, it seems more probable than not that the ascription to Speusippus is a conjecture either of Planudes or of a source later than Cephalas. However, even if Planudes found the ascription to Speusippus in Cephalas, we may conjecture with great probability that this ascription does not go back to antiquity or to a reliable source. For it is highly improbable that such a source was available to Cephalas but was unknown to Diogenes Laertius and to the Greek source of the Arabic life of Plato by al-Ḳifṭī, both of which go back to an earlier life of Plato. *Pace* Notopoulos, the evidence shows that the source which preserved F 87b as a one distich epitaph preserved it as *adespoton*. Nor does Notopoulos comment on the following difficulty: if F 87b is the inscription Speusippus set up on Plato's tomb, how was the author's name transmitted? For it was almost certainly not inscribed on the stela. On the other hand, it is not difficult to see how a Byzantine scholar may have come to ascribe F 87b to Speusippus. He knew the longer epigram F 87a in comparison with which F 87b may seem to be the original "inscription." And mere acquaintance with Diogenes Laertius would suggest Speusippus as the most likely candidate for the authorship. For Diogenes reports that Speusippus was Plato's nephew, that he wrote a "Funeral Banquet" on the death of the philosopher (cf. F 1) and also (?) an "Encomium" (cf. T 1, line 58), that he succeeded Plato as head of the Academy (cf. T 1, lines 2-3), that he was one of the executors of Plato's will (cf. T 37), etc. Be that as it may, the evidence overwhelmingly suggests that both F 87a and F 87b were known in antiquity as anonymous epigrams.

It is highly improbable, moreover, that either F 87a or F 87b is the original epitaph inscribed on Plato's tomb. We know that Diogenes Laertius took F 87a from a source where this epigram came second after that preserved in Diog. Laert. III, 43 = *Anthol. Pal.* VII, 60 = *Anthol. Plan.* III^a 1, 1. The same position of the two epigrams relative to one another may be inferred from the Arabic life by al-Ḳifṭī. For the statement there that on one side of the stela there was one epigram (the same as that found in Diog. Laert. III, 43) and on the other side another epigram (either F 87b or F 87a, see *infra*) is mere embellishment of the fact that the source ultimately common to the Greek life on which 'al-Ḳifṭī's depends and to Diogenes Laertius, already had the two epigrams in the same order as that in our extant Greek sources. Notopoulos himself

has shown that the first epigram in Diogenes Laertius is Hellenistic, and so in all probability is also the second.²⁷⁷ It is well known that in Hellenistic times it became a *topos* to write epigrams on tombs of famous men, poets and philosophers included. Neither F 87a nor F 87b is a variation on the first epigram on Plato's tomb. Whichever of the two is the original epigram, it is rather a literary exercise with which the author tried to reproduce the simplicity and the almost formulaic character of the true inscriptional epitaph.²⁷⁸ Notopoulos cites Waltz's statement to the effect that of several epitaphs devoted to the same person only one may be the original inscription on his tomb. But it is also possible that none of them is the original epitaph. And so the dogmatism of Wilamowitz, *Platon*, I, p. 709, who refused even to comment on the alleged epitaphs of Plato, turns out to have been correct as an opinion though unjustified as an attitude towards the evidence.

Finally, it is impossible to decide whether F 87a or F 87b is the earlier form of the epigram. In this connection it is necessary to say that the Arabic life of Plato cannot be used as evidence concerning the length of the epitaph in its original Greek source. For we do not have the original version of Ibn al-Ḳifṭī's *Ta'rikh al-hukamā'* (the work where Plato's biography appeared) but an epitome of it by al-Zawzanī, written in 1249 A.D. (cf. J. Lippert, *Ibn al-Qifṭī's Ta'rikh al-Hukamā'* [Leipzig, 1903], pp. 11-12, 16-17 and A. Dietrich in *Encyclopaedia of Islam*², III [1971], p. 840). Hence, even apart from the possibility that al-Ḳifṭī himself might have omitted the second distich if the Greek was difficult to translate, it is possible that the author of the epitome may have decided to omit the second distich. But if we cannot be sure about the original length of the epitaph in the Greek source of the Arabic life, it is certain that in that source the first word of line 1 was γαῖα, not σῶμα.²⁷⁹ In this

²⁷⁷ If either F 87a or F 87b was the first of Plato's epitaphs to be written, it is not easy to see why it came to occupy the second place in the tradition.

²⁷⁸ Cf. e.g. Kaibel, *op. cit.*, p. 13, Nr. 35b and pp. 19-20, Nrs. 56-58; Geffcken, *op. cit.*, p. 52; Peek, *op. cit.*, p. 525, Nr. 1750; p. 527, Nrs. 1758-1759; p. 529, Nr. 1766; p. 531, Nrs. 1773-1774; p. 532, Nr. 1776; p. 534, Nrs. 1781-1782; pp. 572-573, Nr. 1889, 5-6, etc.

²⁷⁹ Professor David Pingree, who has kindly translated for me the passage in al-Ḳifṭī which contains the two epitaphs on Plato's tomb (the same as Diogenes Laertius' first two epitaphs), tells me that the Arabic leaves no doubt that its Greek source had γαῖα μὲν . . . | ψυχὴ δ'. The other variant readings, however, cannot be inferred from the Arabic translation.

then the Greek source of the Arabic life agrees with F 87a, not with F 87b. As to the original length of the epitaph there is no way of deciding whether the one distich epigram was lengthened or whether the two distich epigram was shortened.

APPENDIX I

SPEUSIPPUS' DEFINITION OF POINT

In *Topics* 141 B 19-22, as an example of definitions which define the prior by the posterior, Aristotle cites those of the point as the limit of the line, of the line as the limit of the plane, and of the plane as the limit of the solid. Since elsewhere (*Metaphysics* 1090 B 5-13 = F 50) he reports that Speusippus used the notion that point, line, and plane are extremes and limits as an argument in support of the separate existence of magnitudes, it is necessary to say the following: (a) Nothing in *Topics* 141 B 19-22 indicates that Aristotle is ascribing the definitions in question to Speusippus. (b) If Aristotle meant to refer to him, he is in all probability wrong. For Speusippus' statement in F 28, lines 61-62 that the point is the first principle of magnitude, the line the second, etc. and the great probability that he defined the line as the fluxion of a point, the plane as the fluxion of a line, etc. (cf. F 52 with comm. *ad loc.* and pp. 55-56 *supra*) show that he could hardly have defined magnitudes as did those Aristotle mentions. Moreover, we have Aristotle's own testimony concerning Speusippus' definition of point (*Topics* 108 B 26-31 = F 65). He makes it clear that the basis of Speusippus' definition was the similarity of the point to the monad. The ἴδιον of the point is not there given. But, if Speusippus said that the point is similar to the monad because it is the ἀρχή of a line just as the monad is the ἀρχή of number, he must have thought, as Aristotle himself did (cf. on F 52 and on F 71 *supra*), that the point is a monad with *position*. (On the ascription of this definition to the Pythagoreans cf. Proclus, *In Euclidem*, p. 95, 21-22.)

In F 28 Speusippus uses στίγμή to designate the point, and Aristotle employs the same word in his reports on Speusippus' doctrine. Aristotle, however, also uses σημείον, which is the regular term in Euclid and later writers, and Plato denied the substantiality of the non-material point (cf. comm. on F 38, line 1 with note 133). It has therefore been suggested (e.g. J. L. Heiberg, *Mathematisches zu Aristoteles* [Leipzig, 1904], p. 8) that it was due to Plato's influence that στίγμή was replaced by σημείον, a term of an allegedly more abstract nature. But, apart from the fact that Plato's doctrine

about the point being merely a geometrical convention is independent of the question of terminology, the use of σημείον = "geometrical point" is almost certainly attested before Plato: cf. Euripides, frag. 382, 3-4 (Nauck²) κύκλος τις ὡς τὸρνοισιν ἐκμετρούμενος, || οὗτος δ' ἔχει σημείον ἐν μέσῳ σαφές.

APPENDIX II

PASSAGES WHICH DO NOT REFER TO SPEUSIPPUS

Apart from Iamblichus, *De Comm. Math. Sc.*, pp. 15, 6-18, 12 (cf. Chapter V *supra*), two passages in Aristotle are the most important texts which some scholars have wrongly ascribed to Speusippus:

a) *Metaphysics* 992 A 32-33 ἀλλὰ γέγονε τὰ μαθήματα τοῖς νῦν ἡ φιλοσοφία. Ross in his note on 992 A 33 contends that οἱ νῦν is primarily a reference to Speusippus. But the whole context (992 A 24-B 9) shows that Aristotle is referring to the partisans of ideas (cf. 992 A 32 and B 8, Cherniss, I, n. 132, esp. pp. 224-225). Moreover, the words φασκόντων ἄλλων χάριν αὐτὰ δεῖν πραγματεύεσθαι (992 A 33-B 1) are also an indication that Aristotle is not here thinking of Speusippus at all. The latter, having substituted numbers for Plato's ideas (cf. F 29a, F 30-36), would hardly have said that mathematics is to be studied for the sake of other things, a well known Platonic tenet (cf. *Republic* 531 D and 533 B-E).

b) *De Anima* 404 B 18-27 ὁμοίως δὲ καὶ ἐν τοῖς Περὶ φιλοσοφίας λεγομένοις διωρίσθη, αὐτὸ μὲν τὸ ζῶον ἐξ αὐτῆς τῆς τοῦ ἐνὸς ιδέας καὶ τοῦ πρώτου μήκους καὶ πλάθους καὶ βάθους, τὰ δὲ ἄλλα ὁμοιοτρόπως. ἔτι δὲ καὶ ἄλλως, νοῦν μὲν τὸ ἔν, ἐπιστήμην δὲ τὰ δύο (μοναχῶς γὰρ ἐφ' ἑν), τὸν δὲ τοῦ ἐπιπέδου ἀριθμὸν δόξαν, αἰσθήσιν δὲ τὸν τοῦ στερεοῦ· οἱ μὲν γὰρ ἀριθμοὶ τὰ εἶδη αὐτὰ καὶ αἱ ἀρχαὶ ἐλέγοντο, εἰσὶ δ' ἐκ τῶν στοιχείων. κρίνεται δὲ τὰ πράγματα τὰ μὲν νῶ, τὰ δ' ἐπιστήμη, τὰ δὲ δόξη, τὰ δ' αἰσθήσει· εἶδη δ' οἱ ἀριθμοὶ οὗτοι τῶν πραγμάτων.

In a paper entitled "Per l'interpretazione di Aristotele, *De An.* 404 B 18 sgg.," published in *Philomathes*, pp. 146-170, Isnardi Parente tries to ascribe to Speusippus the doctrine Aristotle describes here. Cherniss' demonstration that the parallel passages in Aristotle and the testimony of Themistius show that *De Anima* 404 B 18-27 refers to Xenocrates and to no one else (cf. Cherniss, I, pp. 565-579 and *Gnomon* 31 [1959], pp. 36-51 = *Selected Papers*, pp. 423-438) makes it unnecessary to discuss the question at length. Suffice it to say that, even apart from her arbitrary interpretation of αὐτὸ τὸ ζῶον, Isnardi Parente's attempt to eliminate from this passage

of the *De Anima* all references to the doctrine of idea-numbers is utterly impossible. And, since Speusippus rejected the separate existence of ideas and did not identify numbers and ideas (cf. F 33-36), Aristotle could not have meant here to refer to him at all. Moreover, not only is there no evidence, either in Aristotle or in his own words in F 28, that Speusippus thought that numbers are εἶδη τῶν πραγμάτων and the ἀρχαί of other things, but, what is even more significant, Speusippus' doctrine is incompatible with either of these two notions. For Aristotle says that Speusippus posited peculiar ἀρχαί for each kind of substance (F 29a, F 30, F 45a), that his numbers—unlike the idea-numbers—are useless because they are not causes of other things, and that Speusippus himself did not claim that they are (F 36). When Aristotle says that for Speusippus numbers are the first entities (e.g. F 30, F 34) he refers only to the ontological order of the substances. Finally, Speusippus' words in F 28 (cf. lines 33-36, 38-40, 61-62) refer to magnitudes, *not* primarily to numbers, and mean simply that point, line, triangle, and pyramid are the principles and first entities of their kind, i.e. they are the first magnitudes (cf. F 28, lines 35-36 ταῦτα δὲ πάντα ἐστὶ πρώτα καὶ ἀρχαί τῶν καθ' ἕκαστον ὁμογενῶν).

APPENDIX III

PROFESSOR TURNER ON ACAD. INDEX HERCUL.

To my inquiry concerning his opinion about Crönert's theory on the *Acad. Philos. Index Hercul.* (cf. introductory note on T 2), Professor Turner writes as follows:

In *Hermes* 38 (1903), pp. 357-405 W. Crönert, after analyzing the disturbed order of columns in Herc. Pap. 1021, the *Index Academicorum*, put forward the following hypothesis to account for this disturbance: the scribe who copied Herc. Pap. 1021 copied from single sheets, not from a roll (p. 366), and these sheets were out of order; he also copied on to single sheets, which were later stuck together by a "paster" ("Kleber": Crönert has in mind the *glutinatores* of Cic., *Ad Att.* IV 4a), again in a wrong order. The wrong order was noticed in antiquity: "at three places round brackets ('Klammern') have been observed" (p. 367); "at the left-foot of col. iv appears a right-angled sign (L), and the same sign stood at the foot of col. xii and col. xv; columns iv and xv are, as has already been shown, a wrongly arranged single sheet ('Einzelblatt'). Col. xii however excludes the possibility of a wrongly arranged single sheet" (pp. 367-8). Moreover, "there are a number of marginal notes . . . some in the upper margins of vii and viii, and on the lower margins of ii, v, viii and x . . . in the margin, and above all in the lower margin, they must necessarily have been pointers to the correct arrangement" (p. 368). On p. 369 the question is raised whether these marginal annotations could have been written by Philodemos himself, and the question is answered by a decisive negative: "so wichtig uns auch die Züge des Gadareners sein müssen, so können sie doch weder im Papyrus 1021 noch in der Sokratesrolle erhalten sein." W. Crönert then enumerates the desiderata for a truly critical edition. High among them is the need for a thorough reinspection of the originals in Naples. Particular attention (p. 397) should be paid to the identification on the original of the places where the sheets were pasted to each other ("Feststellung der Kleben"). He admits that during his own earlier stay in Naples he had not realized the importance of this matter. "Consequently I have no notes on the sequences ('Fugen') in the

papyrus . . . In all the eight frames the pasted joins ('Klebungen') must be identified and compared with the widths of the *selides*" (p. 397).

Crönert's suggested explanation is only one of several possible hypotheses (I would myself prefer others to his). However he has set it out clearly as a simple hypothesis capable of being tested, and advanced some suggestions as to how it might be tested. (I should myself agree without reserve that round brackets ("Klammern") are intended to delete the passages they enclose; the right-angle signs are, however, more likely to be paragraph signs than deletion marks.)

Unfortunately at the conclusion of this article (pp. 398-405) Crönert allows himself to draw generalized conclusions about the normal composition of a papyrus book roll and about normal scribal procedure from his as yet untested hypothesis. He is already on the way to persuading himself that it was normal for a scribe to copy a book on to single sheets, and that only after they were written were they pasted together to form a roll.

By 1906 hypothesis had become fact for him. In *Kolotes und Menedemos* (1906), p. 183, he wrote: "A new examination of Pap. 1021 has confirmed my proposed conjecture ('die aufgestellte Vermutung') about the mistakes of the 'paster' ('die Fehler des Klebers'). Close to [Crönert writes 'neben . . . auch', which is ambiguous; instead of indicating physical closeness, it may mean no more than "in addition to"] the fine pasted joins of the *Kollemata* one can also see the much cruder ones of the papyrus sheets which do not go with ('Kehren nicht . . . an') the extension of the strips." This is all he deigns to offer on the importance of identifying the places where the sheets were pasted to each other. I find his language in the highest degree ambiguous, not to say oracular. I do not know what he means by "the extension of the strips" ("die Ausdehnung der Streifen"). And what can be the meaning of "the fine pasted joins of the *Kollemata*"? I can find no sense in this expression unless it signifies the sheet-joins in the papyrus roll as it was purchased from the manufacturer. Is Crönert trying to say that a ready-pasted roll was later cut into sections larger than its original constituent sheets, and that the text was then copied on to these sections one at a time, the sections subsequently being pasted together again? It cannot be too strongly emphasized that the normal practice for a scribe copying a text was to write it into a roll formed of sheets

already put together by the manufacturer. This statement can be made with confidence because in surviving book texts from Egypt it can be seen that the columns of writing pass frequently across the pasted sheet-joints (examples in E. G. Turner, *Greek Manuscripts of the Ancient World* [1971], index s.v. *Kollesis*; discussion of the matter at length in E. G. Turner, *The Typology of the Early Codex* [Philadelphia, 1977], Chap. IV; E. G. Turner, *Recto and Verso: The Anatomy of the Papyrus Roll* [Brussels, 1978], Chap. III).

The subsequent development of Crönert's views on Pap. Herc. 1021 is quickly told. What in 1903 was hypothesis had by 1906 become established fact. In *Kolotes und Menedemos* (1906) p. 184 he writes of the marginal entry in Pap. 1021 at col. vi, that it is undoubtedly the handwriting of Philodemos because the whole entry recurs in Pap. Herc. 164 in the text, not in the margin. In Pap. 1021 it is an "author's note" added subsequently; because it is in the text of Pap. 164, that roll is a fair copy of Pap. 1021. The absence of cogency in this argument hardly needs to be stressed. The possibility (to me, the likelihood) that the scribe of Pap. 1021 simply omitted it accidentally and that a later reader (perhaps a *corrector*) added it from another copy (which could have been Pap. 164!) is quickly dismissed. In *Rh. Mus.* 62 (1907), pp. 624-5, Crönert's way of regarding ancient copying has passed beyond the stage of doubt, and he sets out his unestablished hypotheses as if they were firm conclusions. His final phrase should be quoted: "Diese Entstehungsgeschichte ist sehr lehrreich und wird für manche Fragen mit Vorthail herangezogen werden können." The words are ironically true. Too many of his successors have taken Crönert's unestablished (and in my view unrealistic) hypotheses as if they were established facts. The need for re-examination of the originals to establish the nature of location of the joins in Pap. Herc. 1021 is as strong in 1978 as it was in 1903.

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(On this question cf. further the Addenda.)

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ADDENDA

p. XXI, n. 2:

The book referred to has now been published: *Speusippo, Frammenti*. Edizione, traduzione e commento a cura di M. Isnardi Parente. Precedono testimonianze sull' *Academia* scelte e ordinate da Marcello Gigante. Bibliopolis, Napoli 1980 = *La Scuola di Platone* I. This work came into my hands when my own book was in page proof. I have added a concordance between Isnardi Parente's and my own edition of the texts. I regret to say that I find Professor Isnardi Parente's book unsatisfactory as an edition, as a commentary, and as an interpretation of Speusippus. A review of mine shall soon appear in *Gnomon*.

pp. 200-203 and 461-463:

There is evidence that Crönert's theory concerning the *Acad. Philos. Index Hercul.* and the so-called *manus Philodemi* is impossible. Dr. Tiziano Dorandi, who is preparing a new edition of the *Acad. Index* writes to me as follows: "Del Pap. Herc. 1021 si conservano otto pezzi distribuiti in altrettante cornici per un totale di trentasei colonne di scrittura; a queste si aggiungono altre dodici colonne indicate con le lettere dell'alfabeto da M a Z (eccetto U) e conosciute soltanto attraverso l'apografo oxoniense per la perdita dell'originale: esse dovevano occupare tre cornici (Crönert, *Hermes* 1903, p. 358 ss.). Secondo la ricostruzione prospettata dal Crönert avrei dovuto riscontrare tracce di *kolleseis* dopo le coll. I, II, III, IV, V, VIII, XII, XVI, XVII e XX dell'attuale rotolo e la scrittura non avrebbe mai dovuto passare sopra le eventuali *kolleseis*. L'autopsia del Pap. Herc. 1021 ha dato risultati negativi: sono riuscito a individuare tracce di *kolleseis* a livello delle coll. II/III; della col. VII; delle coll. XII/XIII, XV/XVI e XX (le ultime due meno sicure). Di queste la *kollesis* a livello della col. VII e, forse, quella a livello della col. XX sono coperte dalla scrittura delle rispettive *selides*. Se ne deduce con sicurezza che lo scriba copiava su un rotolo normalmente fabbricato e non su singoli *kollemata*: perde così ogni validità la teoria del Crönert." Cf. also his "Sulla trasmissione del testo del *Index Academicorum Philosophorum Herculanensis*," *Proceedings of the XVI International Congress of Papyrology* (Chico, California, 1981), pp. 139-144.

pp. 442-443:

I have not printed the passage [Heliodorus], *In Eth. Nicom.*, pp. 211, 37-212, 16, part of which Lang includes as frag. 60h because the commentator does not mention Speusippus despite his own comments in F 80c, and because his paraphrase does not add anything essential to what he said in F 80c.

According to the ancient catalogues (Diog. Laert. V, 25 [I, p. 208, 26]; Hesychius, Nr. 84 [Düring]) Aristotle wrote a work in one book on the philosophy of Speusippus and Xenocrates. Whether or not this was a genuine work of Aristotle's (cf. Moraux, *Les listes*, pp. 105-106), we have no information about its contents.

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- 80d Anonymous, *In Eth. Nicom.*, pp. 452, 26-453, 2
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